

The Far Eastern Review

ENGINEERING + FINANCE + COMMERCE

A Monthly Review of Far Eastern Trade, Finance and Engineering, Dedicated to the Industrial Development and Advancement of Trade in Far Eastern Countries.

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AUGUST, 1920

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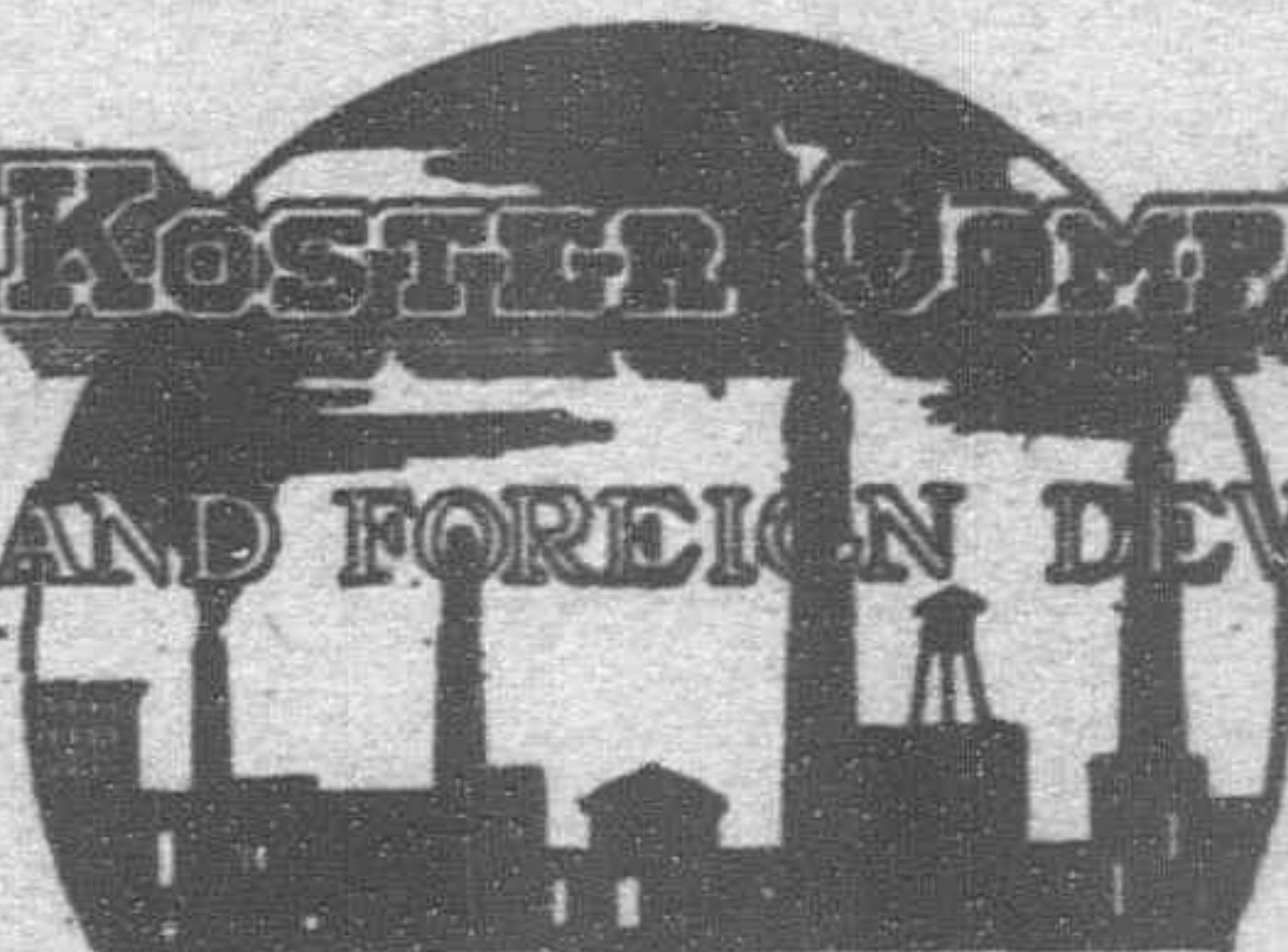
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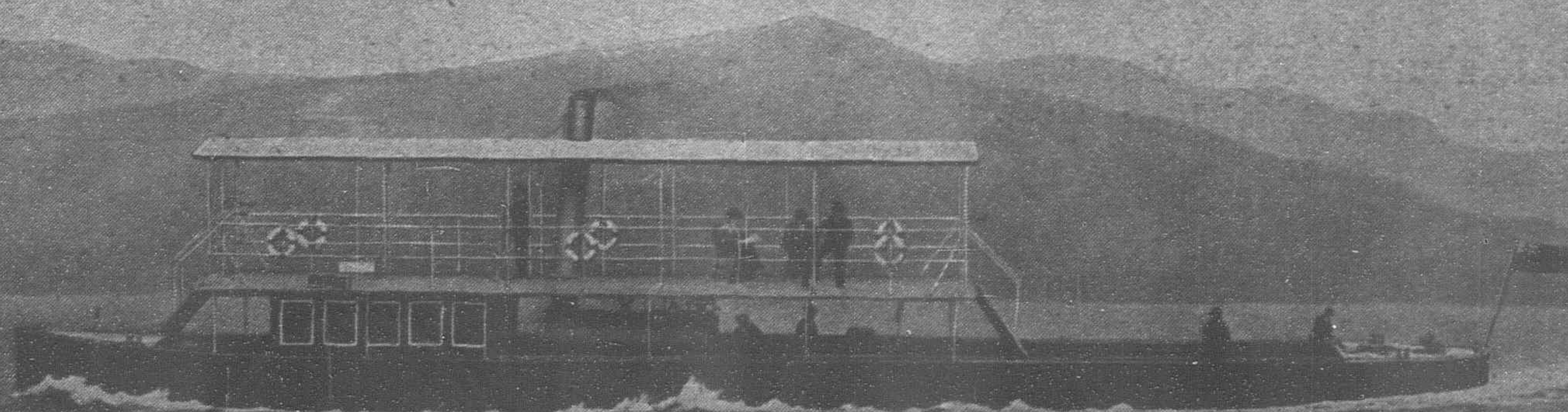
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The Far Eastern Review

ENGINEERING

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VOL. XVI

SHANGHAI, AUGUST, 1920

No. 8

Actual Conditions in China

Mock Warfare Staged by Military Cliques—Dr. Sun Yat-sen Offered the Presidency by Marshal Tuan—The Shanghai Peace Treaty—Why Wu Ting-fang Went to Japan and Why Sun Wrote to General Tanaka

A Curious and Comforting Study in Chinese Contrasts

By Patrick Gallagher

THE series of events that are taking place in China, to-day, have a deeper and wider significance than any of the deductions likely to be drawn by foreign observers. The mind of a nation is never easy to gage "Many men, many minds;" and there are four hundred million very human beings in China and but a promise—although a lively young promise—of modern means of expressing public opinion. China is thinking, surely, but what is China thinking? Along what lines? The thoughtful, impartial observer will be inclined to answer: Along very many lines, because there are more Chinese ways of looking at passing events than there are angles to the public opinion of any other country and not merely through the fact that there is one Chinese for each four people among all the inhabitants of the earth. The mind of China is an ancient jewel, most curiously wrought upon, with many facets bewildering to the eye. That is natural, and not necessarily irritating.

Peking, Canton and other politicians and parasites may be thinking of place, pelf and power; but the merchant is thinking of his markets, the quicksilver movements of the tael and its master, the gold dollar; and the coolie is thinking of his rice. The fall in silver has mobilized the mental strength of the Chinese merchant. The rise in rice makes the poor coolie swear. These constructive elements in the mind of China have little thought to waste upon the mock warfare of Chinese militarists. They have to be up and doing, early and late, and they have neither time nor taste for politics.

Political comings and goings leave the Chinese masses unmoved. The merchant and the coolie have the foreigners on their backs and the greedy *tuchuns*—the militarists who do all the Chinese governing that is done in China—on their necks. They pay, swear and smile, and go on working and hoping for better times.

When one really gets to know the Chinese coolie, there is a compelling impulse to take your hat off to him. He is cheerful—a Mark Tapley among men—he is the most willing and industrious thing on earth. No work is too hard or too menial for him. He is honest and generous and grateful for the least kindness. The backbone of China is the capable, conscientious coolie.

The coolie is clever. He has a bright mind as well as a fine body. Yet he slaves all day for from fifty to eighty cents in the foreign settlements and for as many coppers as he can get in China's interior, where the struggle for mere existence is quite beyond the comprehension of the princely, pampered western working-classes. The finest fellow on earth has to jostle for a living alongside four hundred million competitors who need and want his job.

When you have only from \$10 to \$24 to play with per month, a wife, mother and granny to keep, and babes to feed and clothe, rice at \$16 per picul means a whole lot to think about. That has been the lot of the coolie, these days; and it explains why the Chinese news that foreigners take to breakfast makes scant appeal to him. It takes a couple of catties, or about three pounds, to fill his daily bowl of rice, so a picul lasts him only about three months. If he has a family, usually a picul lasts about four weeks. He is not to be blamed if he prefers a price of \$7 or \$8 per picul. He likes to work, but there is not much fun in working for the rice profiteers. That has been his hard lot, these days.

Nevertheless, he has gone about his business, hauling and bearing huge weights, getting more kicks than cash, and singing the crooning airs of his native silt, despite the harrowingly high cost of rice. His back is broad and his sense of humor is as strong as his back. The backbone of China is sound and sensible.

The mercantile mind of China is keen and conscientious. The Chinese is a born trader. He loves the littlest details of buying and selling. That he is conservative



Burr Photo

The Finest Fellow on Earth

to a fault is true. He would rather pass up the chance of making a fortune than omit one of the preliminary dickering to which he is by habit accustomed. Yet, once he has been convinced of the soundness of a proposition, he plunges in with both hands and feet. When he forms his opinion, he backs it for all



PRESIDENT HSU SHIH-CHANG
"Old Hsu," Whose Powers Were Usurped
by the ex-Bandit, Chang Tso-lin.

he is worth until the pot is his or he is broke. He has the gambling instinct of a Wall Street punter in futures, tempered by a conservatism that antedates Mo-ti or Confucius. In other words, he is as daring and imaginative as he is cautious and cool. He is the world's best loser.

It is well to keep these twin facts in view when gaging the mind of China out of the news of the day provided by Chinese politicians who do all the talking and Chinese militarists who do all the misgovernment in China. The actual mind of China is not reflected by the performances of Marshal Tuan or the protestations of Mr. Hsu. These purely political pyrotechnics are passing phases, momentarily obscuring the real workings of the many mental millions moving steadily along towards the New China that is going to be, either in our time or in times of those who will come after us. It is a curious fact, but it is undoubtedly true, that the unusually fine qualities of the Chinese people at large have caused the scum to come to the top of China's political broth. Nine years after the fall of the Manchus, Chang Tso-lin, the Hunghuhtze (bandit) dictates the decisions of a so-called Chinese republican president and militarists and "constitutionalists" mingle in a free-for-all fight (by tongue and gesture) for the rags and tatters still left of what was once the ceremonial mantle of the Son of Heaven. There is no longer even a pretense of a republic of China. Neither is there a North or a South. The contest now being waged is mean, miserable and purely personal, with no thought of patriotism, without a fleeting care for the weal of merchant or coolie—the real Chinese people who are the dupes and slaves of all the competing factions.

The fierce warriors of Chihli and Anfu and the other factions, now so mixed up that their mother lodges wouldn't know them, have been spilling much ink but no blood to speak of. Peking propagandists tell us that so-called President Hsu has shed tears. Not one of the fierce warriors has shed a drop of blood. Like the female chorus in "The Pirates of Penzance," "Little Hsu" and General Wu sing "Go ye heroes, go and die!" And, like the chorus of policemen in the Gilbertian comedy, the uniformed mercenaries of these comic opera *tuchuns* "don't go." They prefer to go on living, even at twelve cents per day, paid only when the military despot finds himself in a deep hole and seeks to crawl out of it over the bodies of his coolie soldiers.

Anti-Japanese propagandists, honest critics of the Japanese "sabres" (including all the liberal minds of Japan) have denounced in round and rough terms the "militarism" of the Japanese Empire. There are dangerous militarists in Japan. It is well to curb their ambitions. They are a constant source of worry to Japan's best American and European friends and they are directly responsible for injuries done to Japan's prestige abroad. Nevertheless, the Japanese militarist can stick his fingers in his nose at the militarists of China and he can say to his critics the world over: "My sword is sharpened to defend my people, not to oppress them." Japanese militarism is not employed against Japan. Chinese militarism is employed against China. The difference is important.

Says the report of the (British) China Association:—

"Nearly nine years have now passed since the first revolution in 1911; many attempts to form a stable government have been



MARSHAL TUAN CHI-JUI
Military "Boss" of the Anfu Club who Sought
to Become Absolute Dictator of China

made since that time, but the prospects of success seem almost as faint at the end as they were at the beginning. The old régime have not only personal reasons for holding on to place and power, but there is the contingency that if the floodgates of political change were opened wide, the new leaders might be unable to

maintain control. From the constitutional point of view, on the other hand, there is a feeling of resentment that the old system of government which collapsed under the Manchus is being continued under the name of the Republic, that it is as inefficient and corrupt as the administration under the Empire, and that the resources of the country are being squandered for unworthy ends."



GENERAL LU YUNG-HSING
Tuchun of Chekiang.



GENERAL CHANG KWEI-TI
Tuchun of Jehol.

That is a simple statement of fact, proved by the present absurd and inglorious proceedings. The mock warfare that is going on all over China has ceased to wear even the camouflage of principle. On all sides, it is a fight (by gesture and telegram, only) for personal profit, for place, for power. The will or weal



GENERAL TSAO-KUN
Tuchun of Chihli and Rival of Chang Tso-lin
for the Chinese Vice-Presidency.



GENERAL HSU SHU-TSENG

Whose Intrigue as the Henchman of Tuan Chi-jui was the Primary Cause of the Quarrel. He is known as "Little Hsu" to Distinguish Him from President Hsu Shih-chang.

of the people do not figure. The merchant is fleeced. The coolie is victimized. China is outraged to make a *tuchun's* holiday.

The "Secret Treaty" of Shanghai

To be President of China and to tour the world, via Japan and the United States, urging international assistance of the Chinese Republic: Dr. Sun Yat-sen.

To be premier and acting-president, with plenary powers to restore and to maintain order: Marshal Tuan Chi-jui.

That was the compact, made in Shanghai recently by Tang Shao-yi, southern Chinese peace delegate, and General Wang I-tang, northern peace delegate, that precipitated the present mock warfare between the *tuchuns*, or military despots of the Chihli and Anfu parties.

It explains why Dr. Sun and others are protesting that Tuan is anti-Japanese. It explains why the partisans of so-called President Hsu Shih-chang sought the recall of General Wang, the protege of Tuan. It explains the severance of diplomatic relations between the Canton military government and its former civilian associates, Sun, Wu Ting-fang, Tang, etc. It explains all the proceedings since General Wu Pei-fu moved his troops from Hunan and brought about the rout of Tuan's field commander and the conquest of the province by forces in alliance with the Canton military party.

It explains the sudden mission of Wu Ting-fang to Japan and the "open" letter of Sun to General Tanaka, head of the active Japanese militarists. It explains why several of the Peking legations hurriedly withdrew support from Marshal Tuan.

It was a purely personal deal, born out of a personal row. The facts seem to be as follows:—

General Hsu Shu-tseng ("Little Hsu") lieutenant of Marshal Tuan Chi-jui, engineered the combination of *tuchuns* that put Hsu Shih-chang ("Old Hsu") in the presidency at Peking.



GENERAL NI SHIH-CHUNG
Tuchun of Anhwei.



GENERAL YEN SHI-SHAN
Tuchun of Shansi.

"Old Hsu" was merely "window-dressing" for Tuan, who sought to mobilize all the military power and bring it under his own control. Therefore, the Sino-Japanese secret agreements of 1918, which defeated the Chinese at the Conference of Paris. "Little Hsu" and Tsao Ju-lin concocted the deals; Tuan and "Old Hsu" were parties to each of the several unsavory transactions. Baron Goto arranged for the money. The *tuchuns* spent part of the purchase price in bribing the mock Peking parliament and pocketed the balance, less certain sums retained to cover expenses by "Little Hsu" and Tsao Ju-lin. "Old Hsu" was elected and inaugurated as president.



GENERAL TUAN CHI-KWEI
"Little Tuan."



GENERAL LI HOU-CHI
Tuchun of Fukien.

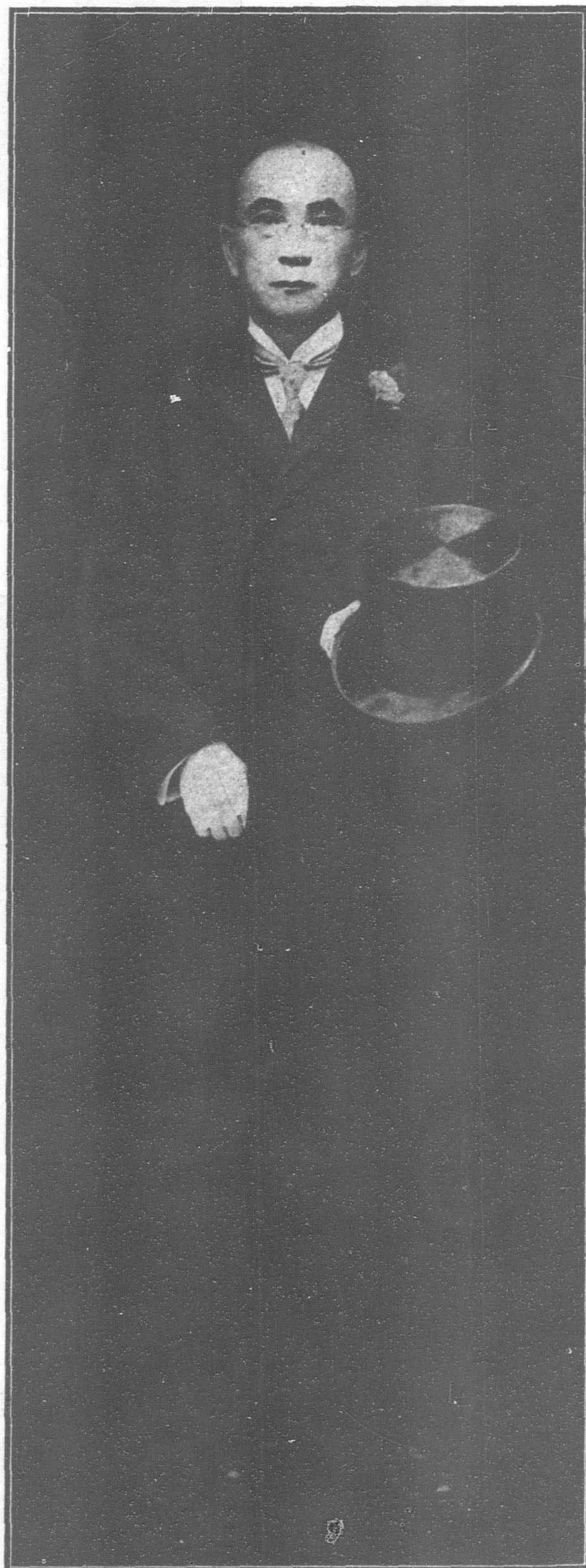
The mock parliament failed to elect a vice-president and that office (sacred to the memories of Li Yuan-hung and Feng Kuo-chang) has never been filled. This is the reason why:

"Little Hsu," campaign manager for Tuan and "Old Hsu," promised the vice-presidency to Chang Tso-lin and to Tsao-Kun, the first an ex-bandit and the second an old war-horse of the school of Wang Sun-ki, the ancient master of Chinese warfare who introduced the still-surviving system of victories by purchase and paper pronouncement. Of course, "Little Hsu" did not tell Chang or Tsao-Kun that he had made the same deal with the other fellow. He needed the votes (or coolie armies) of both to "put over" President Hsu and Premier Tuan.

After the election of "Old Hsu," Chang and Tsao-Kun discovered how they had been bought and sold by the Chinese Mark Hanna or "Boss" Platt. They were both sore as the late Mr. Achilles during an important stage of the siege of Troy. "Little Hsu" had got their goats. So the *hungtutze* of Fengtien (Chang) and the Chihli *tuchun* (Tsao-Kun) got their heads together. They met, conferred, drank each other's health, and

swore vengeance against "Little Hsu" and Marshal Tuan Chi-jui, the big "boss" of the Anfu militarists. They resolved to bide their time, knowing that their opportunity would come and speedily.

Word of the "gentlemen's agreement" between bandit and bully reached Tuan very soon. He was worried. "Divide and rule" has ever been Tuan's maxim, borrowed from his old master, Yuan Shih-kai. So he proceeded to detach Sun and the chief civilians from the Canton military government. He sent word that he was very strong for Sun. He caused his henchmen in the Peking cabinet to bring about the reopening of the Shanghai peace conference and the appointment of General Wang as the chief northern plenipotentiary. Wang and Tang (the chief south-



MR. TANG SHAO-YI
Chief Southern Peace Delegate and Said to be One of
the Parties to "The Secret Treaty of Shanghai."

ern delegate) were properly posted, oiled and greased for the mock peace conference, duly staged at the former German clubhouse on the Bund at Shanghai. The conference was opened with much blowing of trumpets and many foremost foreigners present for "window-dressing." Wine was spilled, speeches were spilled, ink was spilled. Then, Chang and Tsao-Kun got busy.



DR. SUN YAT-SEN
An Honest and Able Chinese Statesman

They questioned the credentials of the peacemakers, intensified the Hunan crisis, directed a general advance upon the Anfu members of the cabinet, Frontier Commissioner "Little Hsu" and every Tuan man within reach of their political digits. The *hunchutze*, Chang, came down from Fengtien to Peking and took charge of affairs at the capital, telling "Old Hsu" what to do and all that was tabu. General Wu Pei-fu's masterly retreat from Hunan, as a direct result of which an American missionary (Mr. Reimert) was murdered, greatly facilitated the blowing-off of the Peking political teapot. The issue was joined, the rival forces were lined up for battle, Chang beat a hurried retreat for his Manchurian stronghold, where some fancy fence-mending was in order. Since then, much ink but no blood has been spilled. The war correspondents, native and foreign, have been forced to do all the fighting by themselves. Like our own colored troops in a civil war that was real and deadly for many a "Yank" and "Johnny Reb," the war correspondents on the much mixed Chinese fronts have "done nobly." If, like old Job's warhorses, they have "smelled the smoke of battle from afar," they are not

to be blamed. It devolved upon them to provide the battles (if not the smokes) and they seem to have done wonderfully well. As usual, the real fighting is being done to the merry music of the treasury tael (ounce of silver). The Chihli faction, being in control at Peking, got first to the banks.

It is known that seven-and-a-half millions were gouged from two of the government banks, just prior to the June settlement, and it is stated that the treasury notes were accepted at an actual interest of 30 per cent. Now, the banks are said to fear that the prospective profit is merely on paper, while the loss is a genuine cash loss. "They took our money," say the angry stockholders; "and then they went to war among themselves. They are no good."

It is hard to tell how much money has slipped through the fingers of the warring *tuchuns*. Not for many years has the air been filled by so many rumors of "concessions." All sorts of ugly stories are current and it is to be feared that some of them are true.

I talked with Dr. Sun about the alleged dicker with Marshal Tuan. He denies it emphatically. Of course, in any event such a denial would be in order. I told him that the source of my information is sound and reliable. Against this denial must be set many known facts that lend color to the compact.

Dr. Sun, according to my information, was to be acclaimed as the unifier of North and South China while Tuan secured Southern support to end the military despotism at Canton and in the South West. Hsu was to be forced out of office and the Peking "parliament" induced to vote the election of the former choice of the Nanking Congress of 1911. After his election, Sun was to head a formidable commission of Chinese notables who would visit Tokyo, Washington and other capitals and appear before the League of Nations at Geneva, Brussels or Olympus. He was to be accompanied by the chosen foreign minister (named in the story) and certain well-known Chinese with recent experience of western diplomacy. And Marshal Tuan was to stay behind and "consolidate Chinese unity." In other words, Sun was to have the shadow and Tuan the substance of power. That was the gist of the cut-and-dried Shanghai "peace"—actually concluded before the opening of the mock conference and the mock militarist warfare.

So far as I can learn, neither Dr. Sun's honesty nor his consistency is in question. Once more, the one singularly upright survivor of every corkscrew twist of Chinese domestic politics since the birth of the republican idea, twenty-six years ago, comes out of the mess and muddle with a clean pair of hands. He seems to have done his best to bring about some practicable means of unification, and it is not yet certain that he has failed. Indeed, if it should prove eventually that Tuan is down and out, if the rest of the Anfu conspirators can be permanently eliminated, it is just possible that Sun might secure enough support to compel the anti-Anfu *tuchuns*, too, or a sufficient majority of them, to step off the neck of China.

The Real Reconstruction of China

A Wise and Practical Chinese Leader

While the Chinese militarists have thus been harrowing their land, Chinese merchants have been getting together in a movement for the modern reconstruction of China that is far more important and more interesting than anything that has happened within the memory of the very oldest foreign resident. A truly great Chinese, a very remarkable man, is the leader of this movement; its first achievement bears directly upon the chief evil of the moment, the profiteering in the people's food.

Fifty-six years ago, in Ningpo district, the wife of a poor man living alongside other poor people on Voh-loong Hill gave birth to a particularly husky boy baby. The mother was greatly respected among her own people because "she had wisdom just like a man," and, although poor and the wife of a man in very humble circumstances, she was unusually generous. Now, the most bitter critic of the Chinese must confess the fact that generosity is a part of their nature. This good woman must have been kind-hearted, indeed, to have won the reputation for munificence that all Ningpo agrees she earned while she was the young wife of poor Mr. Yu of Voh-loong Hill. Because she was kind, she gave of her small store to others in worse luck; because

she was wise, she saved. Thus, she helped her husband to set up in business in a small way in Shanghai, which then seemed quite far away from the seashore of Chinghai overlooked by the tiny houses of Voh-loong Hill. The fine boy baby had grown to be a powerful youth of fourteen years. His mother had taught him many good and useful things and he manifested a marked desire for knowledge and a healthy love of manly exercises. I have seldom seen a stronger-looking man or talked with one who manifested more originality and strength of character than Mr. Yu Ya-ching, the boy who was born to and reared by this interesting couple of Ningpo's "submerged tenth." He is a big man, physically, mentally, spiritually. We had a conference one night about the state of affairs in China that I shall never forget. He knows his own people and he is working for them in a way that is bound to produce big and wholesome results.

I tried to get him to talk about himself—about his ideas and hopes as a little boy, while China was being preyed upon by Ching and predatory outlander. No. He always changed the subject to other people and other things. To Mr. Zee Kien-hoo, a pioneer democratic friend, I am indebted for the facts I gleaned about Mr. Yu's youth and the way in which he became one of China's millionaires and mercantile and humanitarian leaders.

When the family settled in Shanghai, the fourteen-year-old boy was placed as an apprentice in a dye house, the Sui Hong. There, he began to be noticed. Chinese industry is proverbial. How these people do work! Night and day, they are at it, and seemingly very happy over the most wearisome tasks. Young Yu was the most industrious boy in the hong. He was active as a young flea and clever as they make them, even in China, where cleverness is accepted as a matter of course. Mr. Zee tells me that young Yu "made the hong proprietors much delighted." I can quite imagine that. The boy showed the heads of the firm how a little more care on detail produced bigger returns. So the wise owners of Sui Hong made young Yu their chief assistant. When he was twenty-six years old, he branched out for himself.

He became compradore for a German firm, and he proved to be such a good compradore that when the Russo-Asiatic bank was established, Mr. Yu was chosen for the important post of compradore. That merely whetted his ambition. He labored long after office hours and when he had thoroughly established his financial position he turned his spare time over to the advancement of Chinese civic betterment. He gradually gave his nights to this good work, visiting and talking among his own people and promoting useful organizations. His good name was carried from one end of China to the other. His people called him "the wise and good Mr. Yu." A year before the outbreak of the Russo-Japanese war, he was chosen as the compradore of the Nederlandsche Handel-Maatschappij.

His just and wise ways and his love of fair dealing commanded the respect of the foreign community as well as that of the Chinese. Consequently, when people got into difficulties it was quite a common thing for both parties to choose Mr. Yu as their umpire. "He always proved himself a good, amicable arbitrator," said Mr. Zee. His settlements stood the test, and his reputation grew apace.

The year 1904 is remembered in Shanghai because of the trouble that arose between the international mixed court and the municipal police force. The Chinese residents resented what they believed to be unlawful interference with their rights. They appealed to Mr. Yu. He brought about a friendly settlement and everybody was satisfied and happy. After that, when a Chinese

official got into difficulties with foreigners or foreign officials, it became a customary thing to get Mr. Yu to straighten the matter out. He appreciated the foreign viewpoint and he detested injustice. He started the Chinese volunteers and secured their admission to the international defense force; he founded a home for women and children, led the crusade against the kidnapping evil and formed several excellent organizations to relieve distress among the poor and encourage thrift.

Many people from Ningpo have settled in the thriving city of Shanghai, where money is more easily earned. It was important to make communication easy between the two places. At first, three companies had the transportation trade all to themselves and rates were high. It was rather rough upon the poorer people. Mr. Yu started the Shanghai-Ningpo Steamship Company, gave a good and cheap service, made money and friends by his foresight and consideration. The success of this venture led to the formation of Mr. Yu's Sanpoh Steam Navigation Company, which now has eleven steamers trading between Shanghai

and most of the important ports of China.

Nanking was backward in the matter of markets. Mr. Yu was consulted. He visited the ancient capital and with the viceroy of the time as president and himself as vice-president a processional exposition was inaugurated. It was an immediate success and the famous old city soon rejoiced in much trade.

He was one of the original supporters of the republic, helped the movement generously and sought neither office nor honor in return. Several times he has been suggested for important posts. Always, he has declined. He prefers to do practical things for China.

Filial devotion is among the finest of the Chinese virtues. To Mr. Yu, his old mother represents all that is wise and wonderful and beautiful and good in the world. She gave him life and taught him how best to live. Anything she says, he does.

One day, she told him that she thought it would be a good thing to start a school in Ningpo where poor children might get free education. He started the school, at once. The children did not come to it.

"Why don't you come to school and learn things?" the children were asked, and their parents were asked why they didn't send their little ones to the free school.

"Because we are too poor," the children and the mothers answered. Little hands were needed to earn coppers to keep the family pots a-boiling.

Mr. Yu solved this problem by giving nine coppers a day to each child that attended school. They all flocked to the school-house, so the rich man who had to struggle for his own education, who owed most of what he knew to his mother, started two more schools in Ningpo to honor the wise old lady.

"She is the best mother in China," Mr. Zee says; "quite a wonderful woman. All the people look up to her." That is very probable and very nice. To add to her happiness in the fine home he has built for her on his natal Ningpo heath, Mr. Yu established a market, built a fine wharf, opened and paved good streets, and connected the village with the main routes of traffic by laying down a branch railway. He beautified the little place so that, Mr. Zee tells me, "now it is very pretty and much admired by visitors." And to old Mrs. Yu, happy and proud of her successful son, "all the people come for advice and help. She is just like a village elder of old. The people come and tell her everything and do just as she says."



Mr. YU YA-CHING

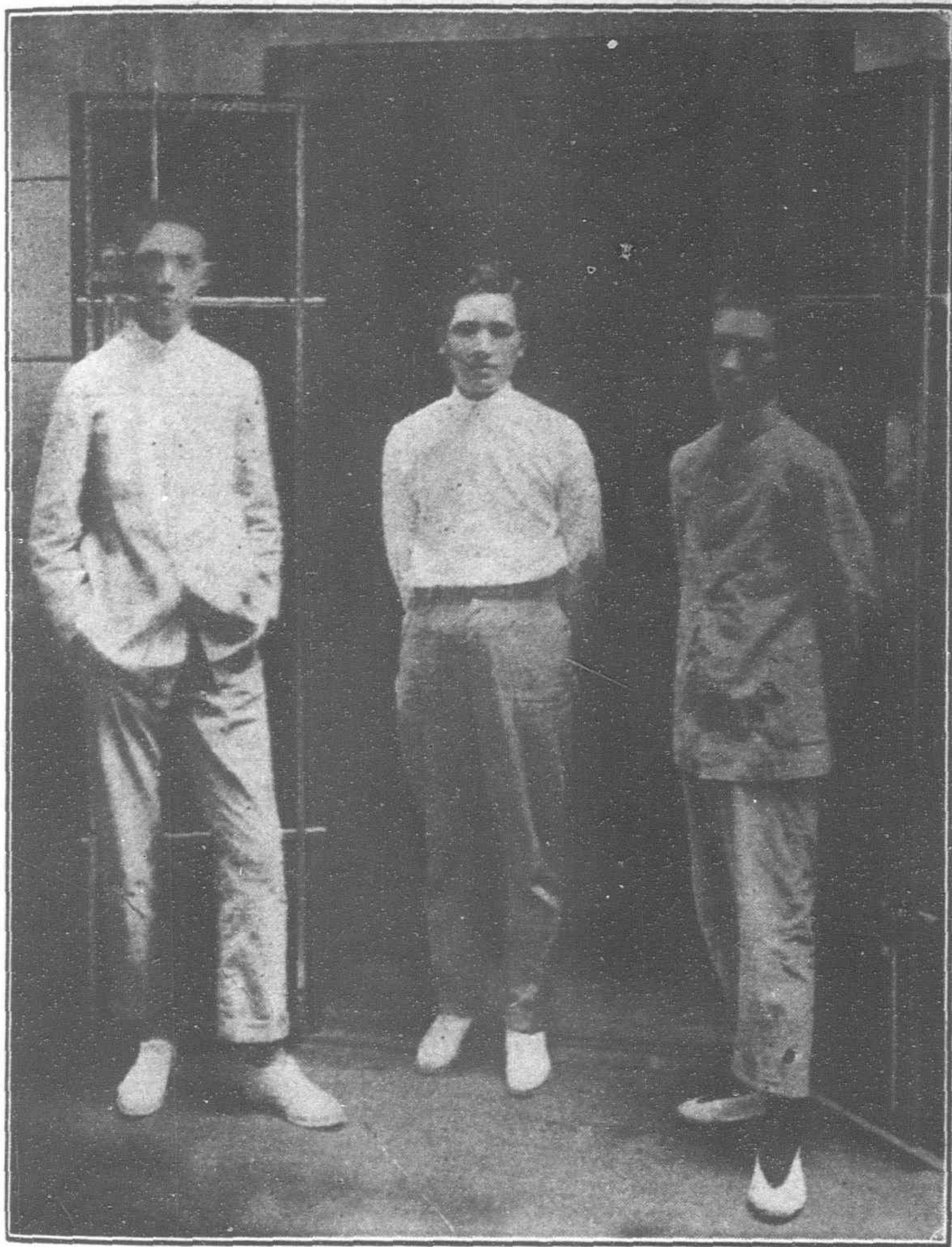
China's First Stock and Produce Exchange



R. YU YA-CHING, the subject of the preceding sketch, is now engaged upon the establishment of a new Chinese bank, capitalized at \$5,000,000. He is also promoting a great new industrial corporation. And he has just launched the most important modern mercantile development in China.

With many American flags waving alongside the banners of the Chinese republic, the Chartered Stock and Produce Exchange of Shanghai, Ltd., was opened on July 1, when over 8,000 of the best people in Shanghai and vicinity visited the spacious building at the corner of Avenue Edward VII and Szechuen Road. Next morning, business began along Wall Street lines, and it was

ture and fixtures are of the finest and thoroughly up-to-date. Indeed, the Chinese have improved in several respects upon western office-furniture models. We noticed in one conference room what looked at first sight to be a handsome polished hardwood desk table. Upon closer examination, it proved to be desk, table and six chairs—the seats being cunningly concealed within the table when not doing duty.



Burr Photo

It is a Marvin-Herring-Hall Safe that Holds the Money and Securities of China's New Exchange.

Mr. Cheng Kong-peh, Vaultkeeper, and his Two Assistants.

marvelous to see how swiftly old and young traders took to the new methods put in operation by returned students. Here is a real, worth while, students' movement, I said to myself; a constructive movement, a practical, business-like movement. Everything about the exchange is western and quite up-to-date, including Professor Irving Fisher's charts and index numbers and the fine Marvin-Herring-Hall vault, which has a two-story elevation and is undoubtedly a great advertisement of an enterprising American concern.

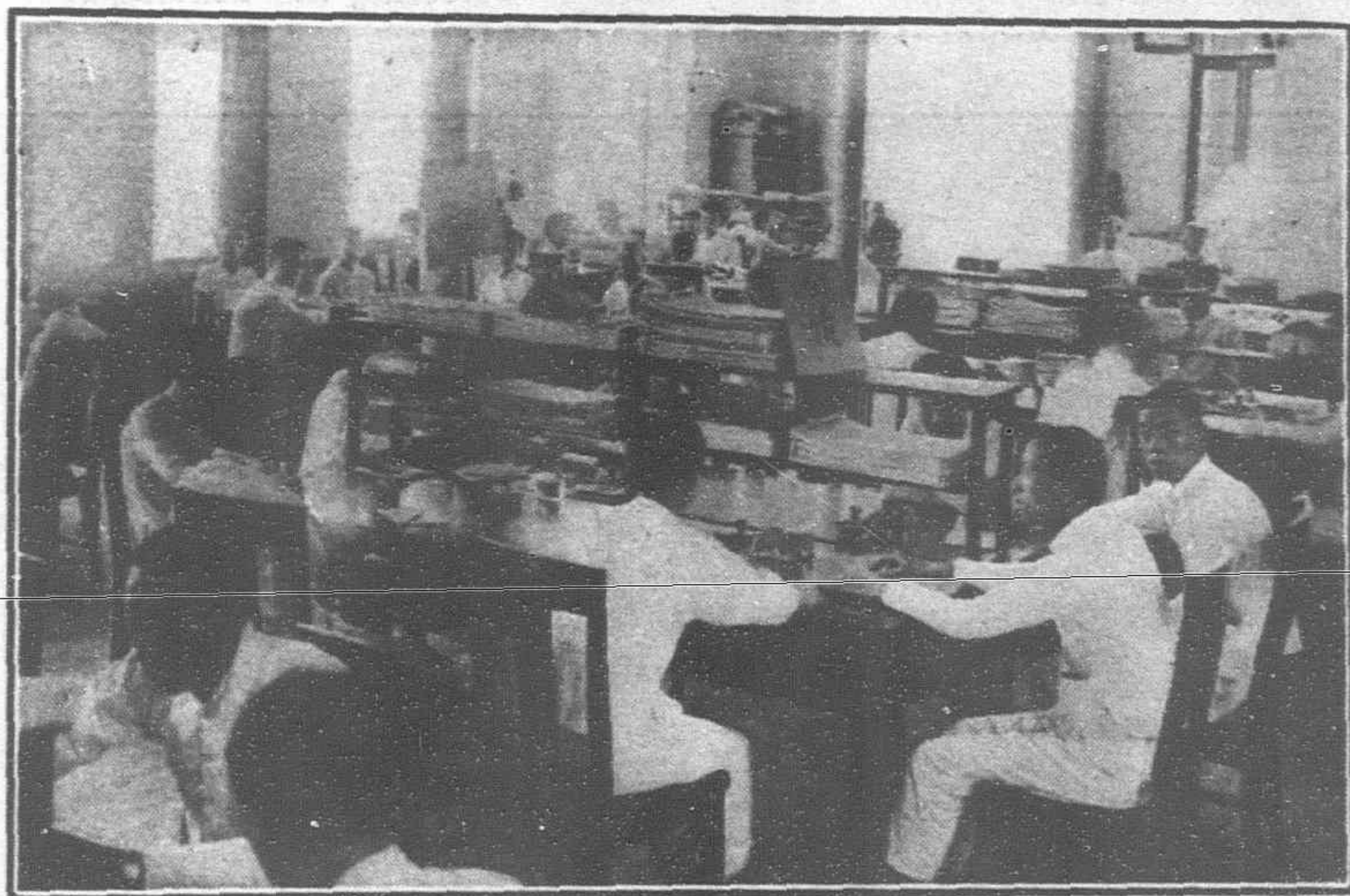
The building is a three-story concrete structure, providing ample floor space for the various markets, general and private offices and reading and recreation rooms. Considerably more than 100 brokerage firms have already leased offices and made themselves at home in their new western surroundings. Furni-



The Six Managing Directors of the Exchange.

From Left to Right—Messrs. Vang Lang-ding, Chow Ling-zu, Chow Peh-chun, Shing Shun-yick, Koh Wai-fung and Shing Peh-wah.

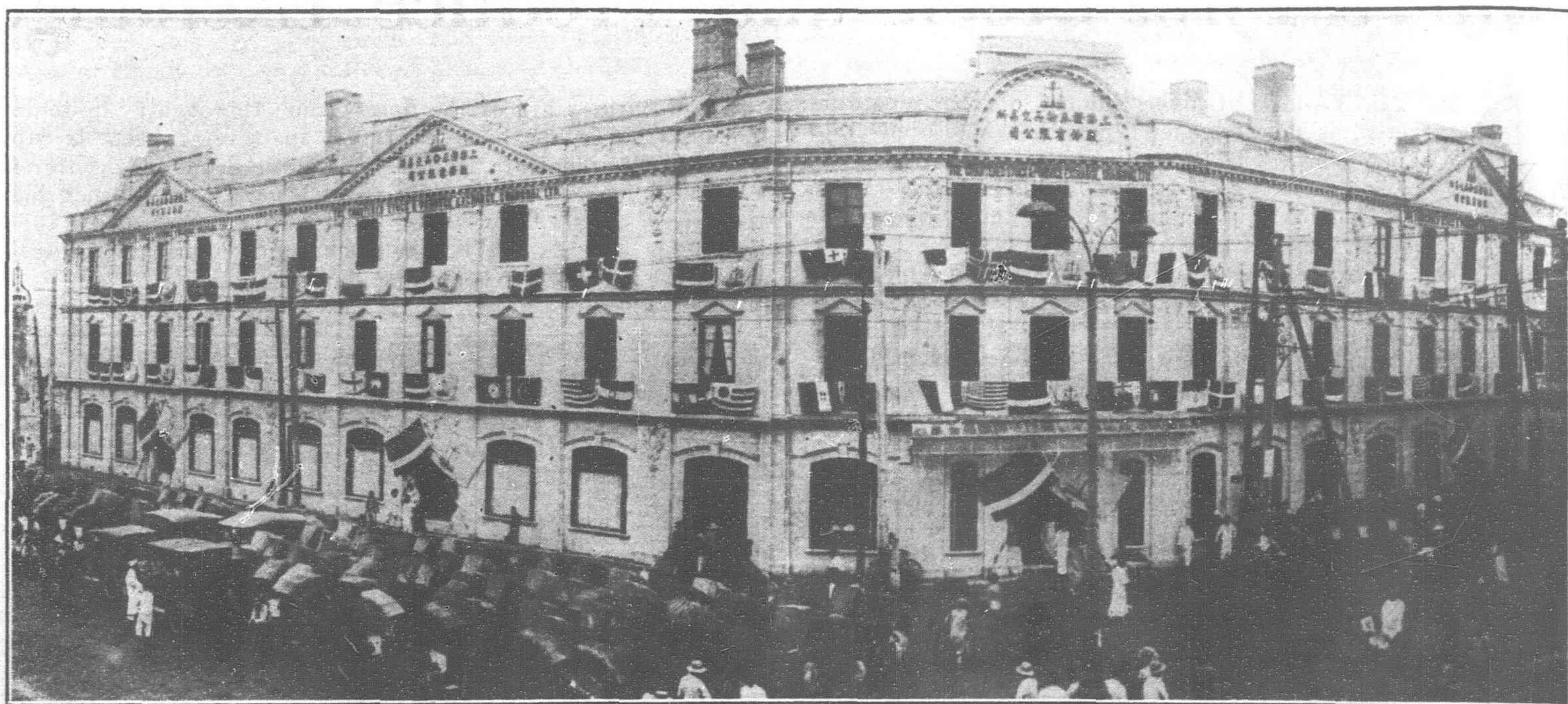
The ground floor is occupied by the two market halls, with their elevated platforms and balconies; the department of market affairs, department of general administration, department of clearance, department of accountance and the vaulthouse which rises to the roof of the first floor. On the first floor are the



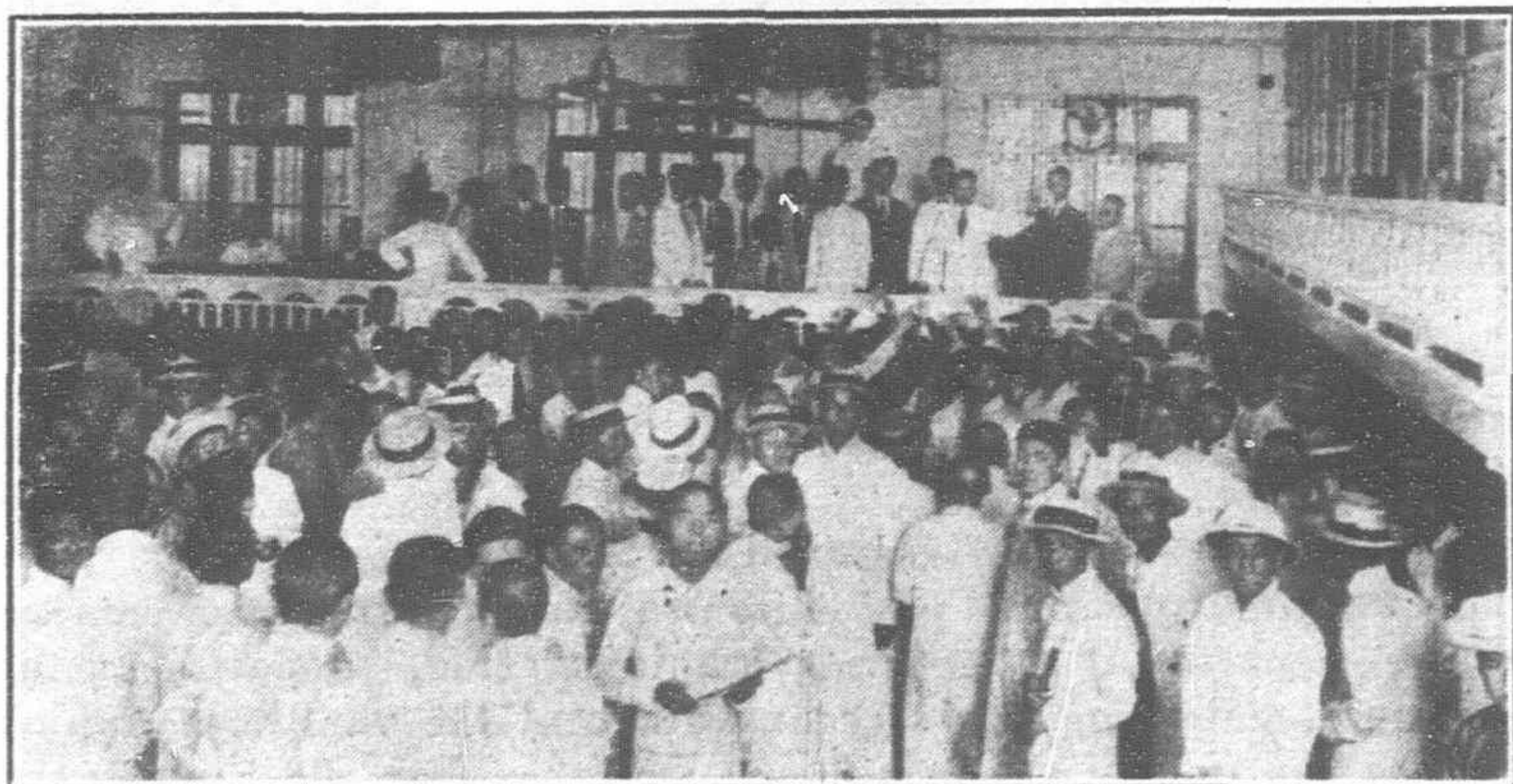
The Department of Clearance in China's First Exchange.

dining-rooms and offices of the brokers' society, brokers' offices, the offices of the board of directors, the managing-director's offices and spacious reception rooms. The second floor is given over to brokers' offices and an assembly hall. Prices and sales and the entire system followed have been copied bodily from Wall Street. The accompanying illustrations tell their own good story. The mind of China is moving along practical paths.

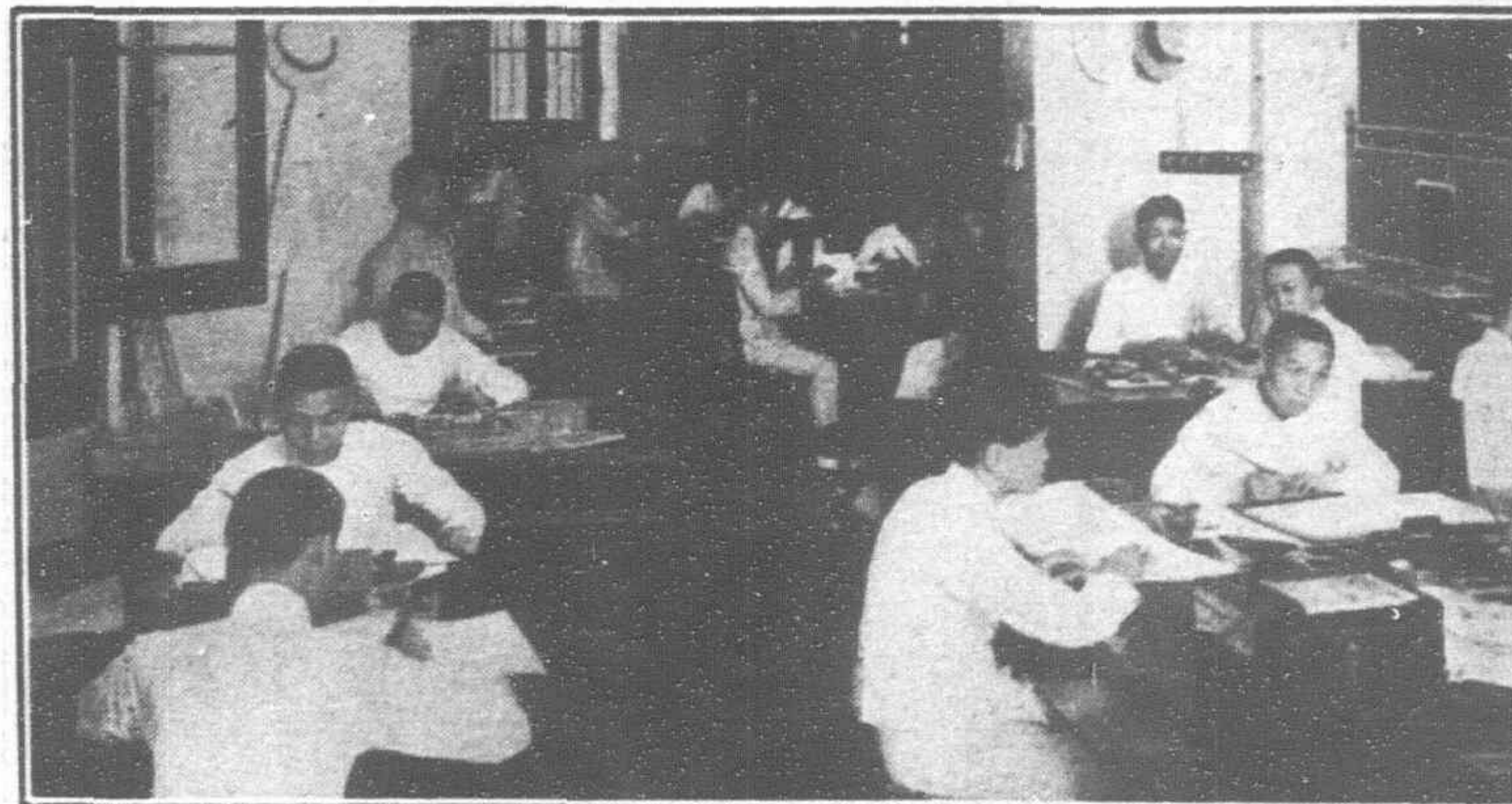
China's First Stock Exchange



Opening Day at China's First Stock and Produce Exchange.



American and Japanese Trained Chinese Directing the Trading at China's First Exchange.



The Accounting Department. Furniture and Office Equipment According to Wall Street Style.



Front Office of the Exchange. Note the American-Style Wall Charts, Fixtures and Filing Equipment.

Paul Painleve Planning Unification of Chinese Railways

AN official statement issued at Peking announces that M. Paul Painlevé, former French premier who is now in the Chinese capital as the guest of President Hsu, is directing the preparation of plans for the unification of Chinese national railways. The admission was not unexpected in informed circles. It is also reported, but not confirmed, that M. Painlevé is



M. Paul Painlevé

presenting plans for the development of aircraft operation in China. The statement authorized by the ministry of communications and the distinguished French visitor is as follows:—

“Under special instructions from His Excellency Hsu Shih-chang, President of the Chinese Republic, Mr. Yeh Kung-cho, high commissioner for industry, who was specially despatched to Europe and America last year by the Chinese government to make investigations, in the name of the Chiao-tung Pu, signed an agreement with M. Paul Painlevé, ex-prime minister of France, appointing Mr. Painlevé technical adviser in connection with the proposed re-organization and unification of the Chinese railways, and not as an ordinary adviser to the Peking government.

“M. Painlevé is now represented by M. Taton and M. Nadel in the conferences of the technical board of the ministry of communications. On account of this, the salary and allowance of the technical adviser are being used for the maintenance of his staff of the scientific and technical mission to China this time, and M. Painlevé will not draw one single dollar for himself. In addition

M. Painlevé and his members will make careful investigations into Chinese fine arts, educational and economical matters during their sojourn in this ancient country for securing useful materials for writing books after their return to Europe.

“In addition to the conferring of an honorary degree of Doctor of the Paris University on His Excellency Hsu, M. Painlevé has brought four letters of introduction from four French Presidents, including M. Deschanel, to the chief executive of China, which will be presented to His Excellency Hsu after they have been duly translated into the Chinese language. Further, when passing through Washington, en route to the Far East in May last, M. Painlevé was asked by Mr. Colby, Secretary of State of the United States, and General Pershing, former commander-in-chief of the American troops in France, to convey two autograph letters for President Hsu.

“The special mission of M. Painlevé is to study technical affairs concerning the proposed nationalization of the Chinese railways in conjunction with Allied members of the technical board, and there will be no collision of interests with British, American and other Allied friends in China, because he wishes only co-operation and mutual assistance. As M. Painlevé is deeply interested in the development of Western and Chinese civilization, he has been offered and accepted the post of chancellor of the Chinese Institute for Higher Studies in the Paris University, with M. Deschanel and Mr. Hsu Shih-chang as honorary presidents. The French scientific and technical mission, under M. Painlevé, will remain in Peking about one month, and then visit some of the important provincial capitals previous to its return to Europe in September next. The members of the mission are:—M. Borel, M. Nadal, M. Martin and M. Bonnard. The last represents the French Foreign Office.”

In several statements, before and since his arrival in China, M. Painlevé has outlined the part he is endeavoring to play in the strengthening of Franco-Chinese interests and relations. During the war, France concentrated all attention upon defeating Germany. China had to be neglected. His mission, he explained, was to counteract this state of affairs and make the



Yeh Kung-cho, Appointed Vice-Minister of Communications

influence of France in the new Republic of China stronger than ever before, by means of a definite program mapped out for him by the French government, the first steps in which are to be carried out by him during his forthcoming visit to China.

The salient features of this program are to attract the youth of China to Paris by teaching them to consider it the centre of western civilization and to create in China centres whence French culture may be disseminated, thus making possible the realization of the plans of a Franco-Chinese intellectual entente which have been worked out in Paris.

"Already there exists in Paris," said M. Painlevé, "an institute for advanced Chinese study, but it will be necessary for us to develop it in such a way that the youth of China shall come to it for study in increasing numbers. We purpose to make the curriculum at this institute so interesting that powerful attraction which it will exercise on the minds of our young Asiatic friends will be simply irresistible. This course of study, which will comprise all the technical courses of our advanced commercial schools, will include, in addition, the study of English, since this language seems to be considered a necessary finishing touch to the equipment of every Chinese intellectual.

"Moreover, we intend to do something that has never occurred before to those at the head of any foreign institution of learning: to teach, likewise, the history of Chinese culture in order to keep the students in touch with their own civilization. Unlike other nations, we do not wish our Chinese students to lose the sentiment of their own nationality and become forever Frenchified; we wish that they may remain Chinese, yet arrive, notwithstanding this, at a real realization of the superiority which they gain for themselves by making themselves part of two civilizations, the oriental and the occidental.

"This task will be made easy for us French because there has existed for a long time a very strong feeling of sympathy between Chinese and French intellectuals. In the eighteenth century we find clear signs of this sympathy in the works of Voltaire and Diderot and since that time it has often been noted how profoundly the intellectuals of China have been influenced by our philosophers.

"So much for Paris.

"In China, our task will be far more arduous, because practically everything there tending to the attainment of the end which we have set ourselves must either be created out of the whole cloth or re-created. Our first task will be to establish, at the universities of Peking, Canton and Shanghai, courses in French—perhaps we may even establish entirely French institutions of learning. The former German university of Shanghai, which has been changed since the war into a Franco-Chinese institution, seems clearly marked out to become an important centre of French culture in China.

"In China as well as in Paris we shall seek to make our efforts felt in the intellectual domain. We have no idea of establishing anything like French domination in China. What we desire is to safeguard our moral interests. This, in my estimation, is the best way to achieve that economic alliance between France and China which it will be necessary for us to form with the Chinese Republic if we are to maintain the position in the Far East which we occupied there before the war."

M. Painlevé was asked whether he would co-operate in his work with the missionaries in China.

"I certainly shall," he replied. "We do not underestimate the services rendered by them to the cause of France and we shall work in harmony with them, though we think that instruction by French laymen teachers is at present absolutely necessary. Our combined efforts, I feel sure, will bear the best of fruits.

"By these means, French culture, so highly prized by the intellectual elements in China, will strike deep roots in the young Chinese republic and, little by little, there will arise that confidence in the French which will be the essential condition of our success.

"Far from our minds are all thoughts of thwarting the plans of other nations seeking to extend their influence in the Far East. Our desire is to have an active part in the development of this marvelous land, the resources of which are beyond calculation.

"I have already explained how we can have a part in the intellectual and scientific development of China. There remains the economic field. There also we can exert considerable influence. Unfortunately it will not, after the way France has been bled by the war, be possible for us for a long time yet to invest our capital in China, but, thanks to the confidence which we mean to inspire among the Chinese, we shall be able to start enterprises in China with the financial co-operation of the Chinese themselves. Like the French, the Chinese nation, which is very thrifty, as its 'woollen sock,' in which it hoards its savings, and it will not hesitate, I feel sure, to invest these savings in enterprise launched by Frenchmen. As a result of this we shall not only have inculcated the principles of French culture in Chinese minds and maintained our pristine influence in China, but also we shall have laid the foundations of a solid economic alliance destined to be profitable both to France and to China."

A Big British Industry

The manufacture of blow lamps, brazing outfits and oil stoves is well known to have been largely in the hands of Swedes and Germans in pre-war times. When the war started both the British and French governments found to their cost they had been dependent upon the importations of these goods for many years. The British authorities therefore approached certain British firms with a view of supplying these goods, and one of the first to respond to the call was the Kitson Empire Lighting Co., Ltd., of Stamford, Lincolnshire, who have devoted a considerable portion of their extensive works to their manufacture. They have recently made many improvements in construction, and they claim to have the simplest and most efficient lamps and stoves that have yet been placed on the market. As is well-known, they are the pioneers in incandescent oil lighting and the "Kitson" and "Kelite" lamps are world famous.

In their new "A" type of lamp, which has just been placed on the market, they have completed a device which enables the user to operate these lamps a whole season without cleaning. In this lamp the vapouriser is so designed that the cleaning operation is only necessary about once in 6 months, and it is simplicity itself. In the stoves they have a similar device which enables the users to take out the filtering material, burn out the carbon and replace it.

The Kitson Company claim to be the largest manufacturers of these various goods now in the United Kingdom, and it appears that what was once a foreign monopoly is now a regular well-established British industry. It may be well to mention that the whole of these vapour burning devices originated from the inventions of Mr. Arthur Kitson when a resident in the United States.

Want Fire Fighting Apparatus

Canton will soon have modern fire apparatus. At a meeting held recently when representative citizens and officials attended, it was decided that \$30,000 be appropriated at once by the Canton Fire Protective Association to procure two motor fire engines immediately. Until all funds are raised, Mr. Chan Lim Pak, of the Hongkong and Shanghai Bank, Mr. Kan Kum Shek, of the Nanyang Brothers Tobacco Company, and the Police Bureau will each contribute \$1,000 for the enterprise. Moreover, Mr. Chan and Mr. Kan will make a loan of \$10,000 each to early complete the fund, while the General Chamber of Commerce of Canton will lend \$5,000. A committee of fifteen, with Mr. Chan Lim Pak as chairman, Mr. Chan Min Yu, vice-chairman, Mr. Chan Lim Chung, treasurer, and Mr. Lo Shuit Po, secretary, has been appointed to execute the scheme.

J (Just) A (About) P (People)

THEY haven't a chance, nevertheless the Democrats are doing their level best to meet the challenge of the G.O.P. They offer Editor Cox for popular preference to Editor Harding. They accept the Buckeye venue, and they take the field with their man in possession of the state machinery and the state patronage. No matter which party wins, an editor will follow the Schoolmaster into the White House. At least, literature is safe—and scholarship can breathe easier and hope for some of the plums.

There is a prevalent notion that Mr. Wilson favored his own profession to the exclusion of others. That is not so. While it is true that certain professors received consideration so long as their "minds went along" with his mind, the fact of the matter is that the former president of Princeton took very little stock in the faculties and more than once, to our knowledge, Ph.D's and LL.D's waxed wroth at the author of "The State," declaring that he discriminated against his fellows of the cap and gown. Contrasted with this coldness towards the campus was the President's emphatic partiality for the news and newspaper-makers of his own and other nations. For a time, Josephus and George (Creel) had almost as much to say in the running (George Harvey would use another word) of the people's business as Joe Tumulty or Newt Baker. If there were professorial ministers, there were editorial and poetic ambassadors; and, at Paris, Mr. Wilson was a constant source of comfort to the correspondents and a continuous cause of pain to the professors.

"Jim" Cox is an editor of note. He grew up to the merry music of the presses and handled much "copy" before he began to make "copy" as a local, state and national leader. Ohio is not yet the "mother of Presidents." Either Harding or Cox will be the seventh President from the pendulum commonwealth of the Middle West, while Virginia will still hold the title with eight sons of the Old Dominion chosen to direct the fortunes of America. Indiana might be called the "mother-in-law" of vice-presidents. This Cox story comes, not from Ohio but Indiana. "Most of our bright authors come from Indiana," said the toastmaster. "And," whispered George Ade, audibly; "the brighter they are, the quicker they come." There came to us, once, an Indiana writer of note and he vouched for the truth of this "shop" yarn about Editor Cox.

There was a bad dam break, a whole town flooded, many people drowned or left homeless in the dark night. There was

no means of reaching the town by railroad and the motor was not then available for swift and sure reportorial work. A country correspondent had the big story of the day all to himself, and he determined to make the most of his chance. He got his facts and sat down beside the telegrapher all keyed up for what the desk fellows call "fine writing." He began thus: "Alone, God sits to-night on Lone Mountain."

The wire was cut through to Cincinnati, where "Jim" Cox was a live news editor, shirt-sleeves rolled up, tuned to the minute to play the dam disaster for all it was worth. His quick hand grasped the first "take" as it was typed from the wire. Cox grinned and smiled and "broke" in with this message to the small town reporter:

"Close your dam story and interview God."

As running-mate to Cox, the Democrats picked Franklin D. Roosevelt, of New York. It's a shame, remembering that this is not a Democratic year. One of the most brilliant of the younger men in the party of Tilden and Tammany is cheerful, popular "Frank" Roosevelt. He is loved by the navy men, and for good reason. He has been "the works," and very good works, too, as assistant-secretary of the navy. He is a strong man, with views of his own and a way of putting them into effect.

In the days of "The Colonel," he was called "Young Roosevelt." Although only distantly related by blood and marriage, "Teddy" and "Frank" saw eye to eye upon many things. What the "Rough Rider" was to the Republican bosses, "Frank" has been to the Democratic bosses. Thus, came he first into the limelight.

He was a state senator at Albany when, ten years ago, the Democratic legislature sat down to the pleasant task of choosing a United States senator. The party had the votes. Boss Murphy had the man. "Blue-eyed Billy" Sheehan had been chosen in advance at Delmonico's. All the legislature was asked or expected to do was to vote Sheehan into the empire state toga. "Frank" Roosevelt got up and when he sat down again the New York legislature and the whole state clawed and clouted over decent r. indecent government. It was the worst snarl in Tammany politics during all the evil career of Murphy.

Roosevelt had the people with him, he headed a small group of self-respecting legislators, and he won a notable victory. Sheehan had to retire from the race and O'Gorman was substituted and elected. Since then, the Democratic candidate for the vice-presidency has been forging ahead and there is no doubt that he will put up a fine fight in his own and other states. Also, Murphy will "knife" him. That is almost as sure as shooting in Texas or Arizona.

Mr. Roosevelt is mightily interested in the Far East. We have often talked together about Pacific affairs. He is for a strong Pacific fleet and a strong, sensible policy, taking sass from nobody and giving no needless offense. He is a fine chap—too fine to be "drafted" for a contest where most, if not all, the chances are with the fellows on the other ticket.

* * *



Governor James M. Cox



Chang Tso-lin

FROM *hunghutze* to dictator, even at Peking, is making pace with a vengeance. Chang Tso-lin won his position as general and lord of the marches of Manchuria by way of the bandit route. He was a businesslike and therefore a successful bandit. He applied his mind to his early retail business in banditry, consequently when the Manchus were moved

out of the Peking palace and honest-to-goodness graft got a good start under the republic, Chang blossomed forth as a wholesaler and, by the application of the most modern methods, he has done very well, indeed. Throughout the length and breadth of Fengtien, he is the whole thing—a brilliant example for every young *hunghutze* in the Dakotas of the Far East. Modern methods pay!

Ever since we read one of the "Bab Ballads" of W. S. Gilbert, we have taken a more or less friendly interest in bandits and banditry; and there is something soft and soothing about the term, *hunghutze*. It rolls off the tip of the lip just as readily as Chang rolled out of the imperial city after he had done his little bit to bring chaos out of sufficiently disreputable disorder. To Mr. Henry A. Menjou, of the Standard Oil Company, we owe our one best *hunghutze* story.

Henry was roughing it in Manchuria. The shades of eve were falling fast, the sorghum was eight feet tall and the end of the journey was miles and miles away. The driver of the bullock-cart was nervous and afraid. He desired very much to turn back and seek shelter for the night in the town to the rear.

"Belong plenty *hunghutze*," he explained.

Henry cheered at the news. He had heard much about *hunghutzes*. He desired to make their better acquaintance. The *goliard* (sorghum) was just about the right height and he had a nice, new automatic. At last, here was real adventure and a story in the making to tell the boys back home—and the best girl, too. Henry is of an age when there is sure to be a best girl patiently awaiting the end of the S.O. matrimonial probationary period—the three years rule, within the term of which marriage means divorce from the greatest selling organization on earth. Henry shook out his automatic, swore by Nurhachu that he would defend the lives of the bullocks and their driver and prepared to give the bandits a warm reception. Thus encouraged, the still nervous driver prodded his team and sang lustily. To keep up their courage, the natives ever sing. Unexpectedly, the song ceased. The silver moon was now playing over the waving tops of the sorghum. Light and shadow danced the weird gavotte of the great spaces. Catching hold of Henry's elbow, the driver pointed to a swiftly-running dark thing just showing through the moonlit crop.

"Hunghutze, master!"

Henry nodded and fingered the trigger of his gun. The game was getting interesting.

Five minutes later, the driver again burst into song, nudged Henry and whispered "Belong more *hunghutze*."

Henry took his eyes off the running dark thing that was keeping pace with the cart, scanned the sorghum to the rear and counted two more black shapes running after them. The plot was thickening. It was going to be a fight worth while. Henry measured the distance to the shelter side of the off bullock. When the moment came, he would vault across and take every advantage of the living cover, shooting after the manner of Buffalo Bill and Ole Rube. He was on the alert. They must soon attack. Perhaps, it would be as well to stop and get first to the firing-line? Just as he was asking himself this question, the driver nudged him again.

"Look, master," he whispered, nervously quaking; "belong plenty *hunghutze*."

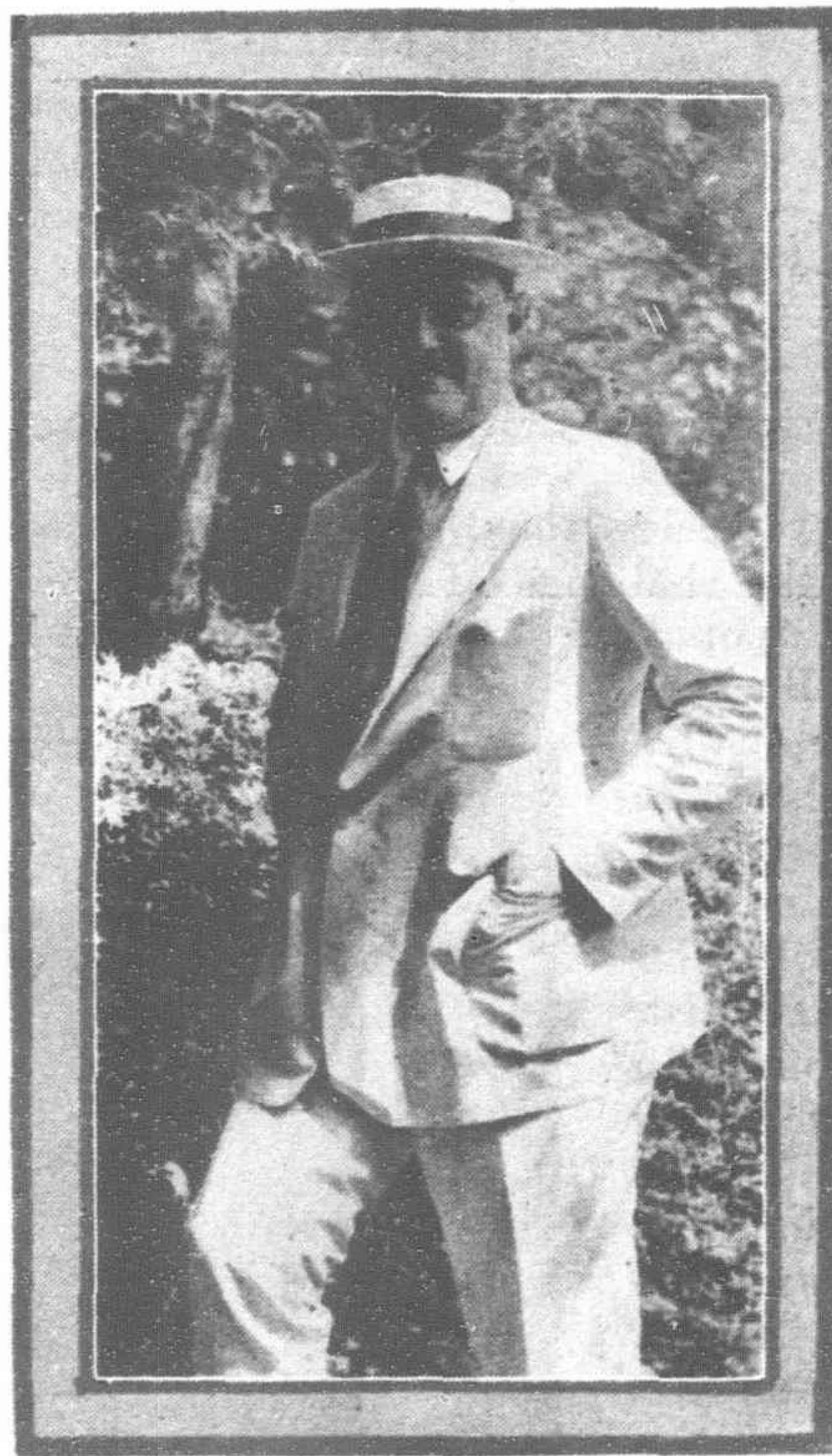
Henry looked to right and left and, sure enough, there were the running black things—scores of them, on all sides—a whole army of deadly enemies! Henry whistled softly. That did not look like sport. All the symptoms suggested quite a one-sided play in the making. There might be no story, after all; that is to say, there would be a story, all right, but he would probably not be there to tell it. The driver was now singing at the top of his lungs, forcing the pace of his lumbering beasts. Then, suddenly, bullocks and song stopped. The driver said quietly:

"Master, no b'long *hunghutze*; b'long pig."

BLOOD tells. One of the big lessons of the war is that, in war as in peace, men are big or small not by any accident of birth or fortune but because they have or they have it not in them to do big things. The history of America is a history of men who have believed it to be possible to achieve anything worth while. They have left their own good mark upon their

country and their times. When America went into the war, the big men of the nation were the first to come forward to offer their services. They sought neither exemption nor deferment; some of them, like Putnam, died in battle, fighting gallantly and well for the good cause.

A fine type of the big young men of America is Mr. Ralph P. Dort, who is now in China establishing agencies for the Dort Motor Company. Young, married, the father of two healthy and handsome youngsters, wealthy and wedded to his big business, Mr. Dort did not hesitate when the call came for soldiers. He enlisted at once in the sixth regiment of U.S. Marines and was with the first of our boys to



Mr. Ralph P. Dort

carry the fighting to the right side of the western front, participating in the offensives during the summer of 1918, which brought such glory to the "Soldiers of the Sea." His excellent knowledge of French was the compelling cause for his transfer to Paris after the armistice for *liaison* services in which he remained until June 24, 1919. After that date Mr. Dort took over the European business for his firm until March, 1920.

A Princeton university man, Mr. Dort has been closely identified with the great success of the Dort Motor Company. He helped his father to found this corporation in 1915. They started with \$300,000 capital, big ideas and a fine proposition—a small, medium-priced car. During their first year, they sold 480 cars; during the second year, 5,600. Then came the war and, while the son was in France with the marines, the father was working night and day building trucks for Uncle Sam and Pershing's armies. With the return to peace, last year, the Dort Company delivered nearly 32,000 cars from the big factory at Flint, Mich. Their production next year will be 45,000.

Mr. Dort is an energetic salesman. "I am not only selling Dort cars, but the Dort organization," he told a representative of THE FAR EASTERN REVIEW. "I am circulating the idea which we at home appreciate now so keenly—that the automobile is no longer a mere luxury, but a public utility, and that the business of manufacturing automobiles means as much to world transportation, with its multifarious effects upon prices and the relationships between a country's citizens and nations themselves, as the railroad or steamship line." While in Japan, he opened a branch at Tokyo and, in addition to the Chinese agencies, there will be Dort men on the job at Manila, Batavia and elsewhere in Asia before Mr. Dort completes his tour.

* * *

AS "Bet you a million, John," John W. Gates was known from one end of the world to the other. He was about the last of the Wall Street type created by Jim Fiske and his cronies and competitors, men who risked fortunes at a throw of the dice on 'Change and put Big Business on the

map. A thing had to be big to interest Gates. A man had to be tall above his shoulders to travel with Gates. He radiated largeness of vision and detested men of small perspective.

For six years, Frederick Tillson was private secretary for "Bet you a million, John," moving about with the magnate, fitting into his plans, seeing them through. Mr. Tillson learned a lot from the great broker, saw more of the globe than most of the best of travelling men, and figured in many famous seven figure deals. More than once he suggested an investment that proved a bonanza. They got along well together because both had the spirit of achievement.



Mr. Frederick Tillson

Born in Manchester, England — the world's "Cottonopolis" — Mr. Tillson, still on the sunny side of forty, moved with his family to Toronto, Canada, when he was a two year old. He graduated from McGill College with the class of 1900. A noted hockey player, he tickled and tossed the sphere for the Wellington world's champions for three years. In 1904, he began business, traveling for a Canadian grain house, and this brought him in touch with "the plunger," Gates. After his six years with Gates, he joined the greatest of all the mail order houses, Montgomery, Ward and Company. That was in 1912. He has been with them ever since, carrying their wholesale and retail business to every

port of consequence. He has not spent five months out of any one year in the United States, yet he visits Chicago every year and participates in the planning for the year to follow.

A vigorous and enthusiastic talker, when on the subject of the Montgomery, Ward Company, Mr. Tillson expounded the policy that has ever been the guiding star of the organization to the FAR EASTERN REVIEW in the following statement: "Just a little more than a square deal for the customers, a deep interest in their business welfare, and a principle of absolute fairness regardless of the size of the order involved, has built for the Montgomery, Ward Company a wholly satisfied and dependable clientele that is ever widening as the company expands in new fields."

One of the very ablest among American foreign field managers, Mr. Tillson is rapidly carrying out the aim of his firm that made its national reputation and is now winning for it a sound international reputation: there must be a Montgomery, Ward branch in every centre of commerce. As the director of Far Eastern activities, with offices in Shanghai, besides handling all China and Japan, he supervises the offices in the Philippines and throughout Asia and Malaysia. He is ever on the jump, stirring things up where his ginger qualities happen to be most needed and establishing new agencies.

* * *

MORE than 1,700 British soldiers came out of the war blind men groping in the darkness; and, of over 23,000 whose eyesight suffered more or less, many are passing into complete blindness, from day to day. To help these victims who helped us to victory, Shanghai contributed almost \$100,000, the largest single contribution from any single overseas community.

Mr. Walter E. Hobbs, O.B.E., came to Shanghai primarily to thank the subscribers to the fund in the name of Sir Cyril Arthur Pearson, London's justly famous blind editor and newspaper proprietor, who has practically devoted all his time and thought to St. Dunstan's, the reconstructive hospice where helpless blind soldiers are being trained to begin anew the winning of independence. Like the late Joseph Pulitzer, founder of the *New York World*, Sir Cyril is a great example of cheerful fortitude under a peculiarly sad affliction. Pearson proved himself

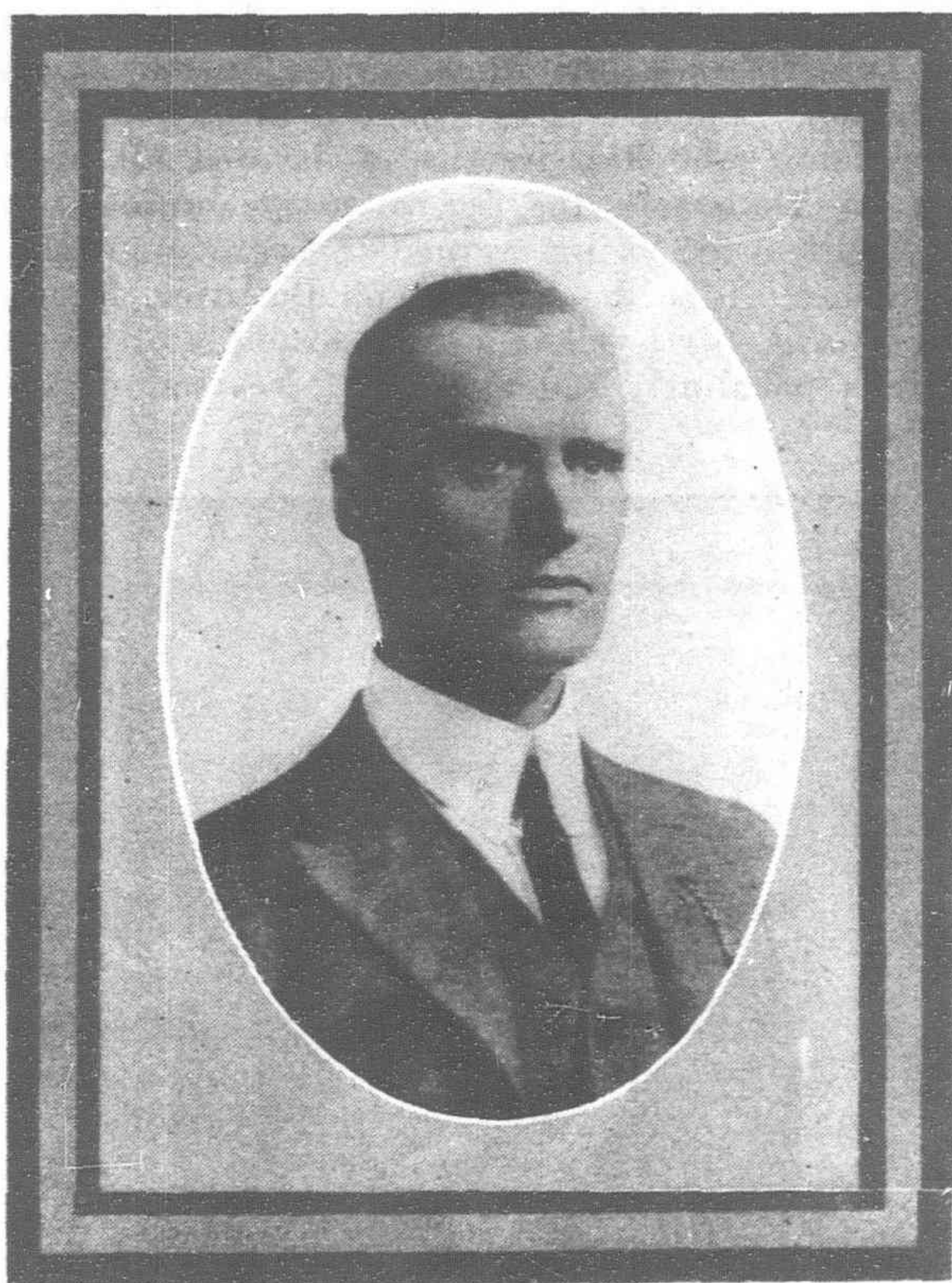


Mr. Walter E. Hobbs, O.B.E.

the one serious competitor of Lord Northcliffe, while the "king-maker" of Carmelite House and Printing House Square was Mr. Alfred Harmsworth and chiefly famous for his ownership of the *Daily Mail*. From the days when he was building his first fortune with *Pearson's Weekly*, before he started the *Daily Express* and its string of northern satellites, Walter Hobbs was one of Pearson's most trusted and ablest lieutenants. Mr. Hobbs was manager of *The Standard* until it ceased publication during the second year of the war. He was chosen as controller of supplies in the ministry of national service and did exceptionally fine work. Now, he is touring the world with his friend, Sir Raymond Dennis, carrying the thanks of Sir Cyril to those who aided the blind and also bearing a cordial message to British overseas editors from Lord Burnham, of the London *Daily Telegraph*, who is president of the British Empire Press Union. Mr. Hobbs and Sir Raymond, on their way to Peking, collided with the *tuchun's* war at Tientsin. It meant a loss of valuable time but doubtless they secured some first-hand information regarding the chief rock in the road of Chinese progress.

* * *

AN engineer who goes about and does things, sees and hears a good many things. Henry Katten has helped to take the gold out of a western "hole in the ground" and the squeak out of the porkers at Chicago's most famous show-place, the Union Stockyards. For a time he was chief draftsman on power plant and general packing-house machinery for the Armour concern. He has done responsible work for the International Harvester and Western Electric Companies, and just before he came to the Far East, he was manager of the engineering sales department of the Walworth International Co. at New York. He represents that concern, now, in China and the Philippines and intends to make his headquarters at Shanghai.



Mr. Henry Katten, M.E.

He is "Harry" Katten to most of his friends and he has a fund of good stories to tell about Iowa life. He was born at Le Claire, got his practical training in his father's foundry and machine shop and the technical pointers at Iowa State College. He sees a fine future for his firm's products in Eastern Asia.

Coir vs. Manila Fibre

The "Philippine Journal of Science" publishes a report on the mechanical properties of Philippine coir and coir cordage compared with Abaca (Manila hemp). The tensile strength of single fibres of coir, after retting, gave an average of 852 kilograms per square centimetre, and 1.208 kilograms per square centimetre for the machine-cleaned fibre, the tensile strength being about one tenth of that of Manila hemp of the government grades F and G. The difference in the tensile strength is less marked, however, when the fibre is made into cordage, the strength of the coir rope being about one-fifth of that of Manila hemp rope of the same size. The strength of the coir rope suffers a diminution of 14 to 26 per cent. on immersion in fresh water for 24 hours, whereas the strength of Manila hemp rope is but little affected by this treatment. Little additional change occurs on continual immersion in fresh water, but the strength is further decreased by the action of salt water or by exposure to the weather.

Coir cordage and coir filaments are very extensible, the elongation sometimes amounting to as much as 39 per cent. If coir rope is wetted, the extensibility is increased by about 3 per cent. The elongation of the rope is only slightly greater than that of the filaments. In the case of Manila hemp, filaments of the government grades F and G give an average elongation of only 3.6 per cent, but rope made from these grades gives an elongation three or four times as great. Coir has pronounced plastic properties and no definite modulus of elasticity. In consequence of this the shock-absorbing power of coir is relatively small, whereas Manila hemp is a highly resilient fibre and well adapted to absorb shocks.

Coir, although growing plentifully in the Philippines, has received comparatively little attention owing to the marked superiority of Abaca. It is used as fuel or allowed to decay. In order to utilize this fibre for the manufacture of brushes,

door mats and cordage, it is suggested that suitable machinery should be employed to supersede the large amount of cheap manual labor required in this class of work. Such machines have already been tested by the Bureau of Science, Manila, for crushing, fibre extracting and willowing.

The increasing importance of the cocoanut palm in India as a result of the improved processes for the treatment of its oil is likely, in the near future, to lead to the adoption of machinery for treatment of the fibre, especially in the western and south-western coasts where water carriage for the nuts to a factory situated near the shore would make a cheap and easy means of communication.

The definite figures given above regarding the comparative strength of coir and Manila hemp should be of value to all who use the former for lifting or binding purposes.

Big Japanese Electric Power Project

A Tokyo dispatch states that a huge electrical scheme with ¥100,000,000 capital, to be called the Imperial Railway Electric Power Co., is proposed in a bill now before the Diet. The company will supply electric power to the government-owned railways, and in case it has electric power to spare it may supply other companies and railways, if the government approves. Other business connected with electricity may be undertaken, under government approval. The company's charter is to be for 100 years. One-half of the capital is to be paid up by the Japanese government, and the stock may be increased only with government permission. Shareholders in the company will be limited solely to the government, public organizations, Japanese subjects, and juridical persons established in accordance with Japanese law. The directors are to be appointed by the government, and they can engage in no other business without government sanction. The government is to control debenture issues, and profit distribution, and the company is to be established by a committee to be appointed by the government.

Largest Hongkong Shipment of Manganese Ore

The largest shipment of manganese ore that has ever left Hongkong, 3,000 tons, was shipped from that port during July by the steamer *Canibus* for Baltimore, Md., by the South China Development Syndicate, a Chinese-American corporation formerly known as Henry Hope & Co., importers and exporters of Hongkong.

It is stated the company has done half a million dollars of manganese business alone during the past six months, and it also handles antimony, arsenic, asbestos, bismuth, molybdenite, tin, and wolfram, among the minerals, besides general China products.

The South China Development Syndicate is being registered at Hongkong with a capital of \$200,000. The officers are Benton C. Byrd, president and general manager; Loring P. Rixford, vice-president and sales manager (New York), Kwok E. Shun, vice-president and sales manager; Kwok Sai-cheuk, secretary-treasurer; Soo Laitong, chief accountant and import manager; Philip L. Kim, mining engineer; and Kwok Kai-hing, export manager.

Shanghai Dock and Engineering Company

The Shanghai Dock & Engineering Co., Ltd., report net profits for the year ending April 30, 1920, including the amount brought forward from the previous year, amount to Tls. 1,706,347.82. Deducting the interim dividend of Tls. 5 per share paid in February last, there remains for distribution the sum of Tls. 1,430,347.82.

The Far Eastern Review

A Monthly Review of Far Eastern Trade, Finance and Engineering, Dedicated to the Industrial Development and Advancement of Trade in Far Eastern Countries

ENGINEERING FINANCE COMMERCE

5 JINKEE ROAD, SHANGHAI, CHINA

Telegraphic Address: Farview, Shanghai

SHANGHAI, AUGUST, 1920.

An Open Forum

THE FAR EASTERN REVIEW is an open forum. All constructive criticism is welcomed and space will be found for any contribution that will interest or inform our readers. There is no such thing as a monopoly of wisdom. Only a fool deems himself or his opinions infallible.

During the lifetime of Andrew Carnegie we often sat with the canny Laird of Skibo in his own favorite niche of that huge palace that he built and furnished without stint for the woman of his heart at Fifth Avenue and Eightieth Street, New York, close by Central Park. It is the most wonderful study in all the world, a real restful room, with many shelves of priceless books, beautiful art treasures and a huge open hearth. The mantel of carved wood was designed by the Laird himself, as he told us (but not for publication) one night while we were talking together about China and the Old East. He knew more about China than many men who have lived long in the country and who talk much about it. That, by the way.

We were admiring the fire-place and assenting to his view that the hearth is the home. You get closer to a man when you sit with him by "his ain fireside."

"That is my whole philosophy of life," said "Auld Andrew"; as he pointed to the inscription carved above the mantel-piece. Here it is, as nearly as we remember it:

"He is a coward who dare not think.
"He is a fool who cannot think.
"He is a knave who will not think."

That is good philosophy. A man who desires really to think grows in thought and in the capacity for thought only in so far as he is willing to rub mental elbows with his fellows. Nothing changes more swiftly than thought, because it is the intangible element that catches all the conflicting mutations of life and energizes each tangible force and atom, playing upon every passing phase like an invisible bow drawn over the strings of a violin. We feel the vibration, we see the disturbance of minute particles of resin, we hear humanity's multicolored song, but we do not see the invisible and often unconscious bow that stirs the song from silence into life.

* * *

The Most Important Event in China

NOT merely the Chinese of Shanghai, but the Chinese people as a whole are to be congratulated upon the successful inauguration of the Chartered Stock and Produce Exchange. It is a great victory for common-sense and the most important event in China since the will of the people forced the Manchus into retirement.

The true significance of what, to the stranger or the merely superficial observer, might seem at the most just a sign that China's modernization is a little more than skin deep, will be fully appreciated only by those who have themselves got beneath the skin of the marvelously interesting people of this country. How the "Old China Hands" of forty or fifty or a hundred years ago would sit up and rub their eyes if only they could take a "look-see" at the wonder brought to pass by Mr. Yu Ya-ching! Meadows would draw very interesting conclusions. Gutschlaf would find some precedent in the golden age of Yau and

Shun or in the after-Tang times. Williams would show us in detail how the foreign influences of his compradore experience in the "Model Settlement" had been caught as in a lens by the concentrative character of Mr. Yu and by reason of his personal powers of persuasion so played upon his own people and his own times that the thing became possible, and therefore an established fact. Sinologues of darker days, to whose quiet faith and painstaking labors we owe much, they are dead. They cannot philosophize, they cannot talk, because they are dead and the New China is a living reality—a vibrant, throbbing, kicking, go-ahead reality.

Mr. Yu's great victory is one over ancient custom and prejudice—the family and sectional conservatism that stands as a Tartar Wall between China's people and Chinese unity. The wall has been breached by the opening of the Exchange and a real combination of many group and family interests. It should not be so difficult to blast and raze all that remains of the barrier, now that example has been set and a good start made.

It is more than twenty years since the establishment of a stock exchange was first proposed by the Chinese business men of Shanghai. The proposition was put up to the yaméns of Peking. The mandarins were furious. The "Old Buddha" had quite a fit. Not merely was a permit refused, but the proponents of the plan were warned to beware of these wicked devices of the "western barbarians" and they were properly reproved for attempting to scratch the pure jade of Chinese commercial life by a "foreign devil" foolishness. The vermilion pencil knocked the project into a cocked hat. The exchange idea was dropped.

In the fifth year of the republic, Dr. Sun Yat-sen revived it, and he won the consent of the ministry of commerce in so far as the stock exchange was concerned. Peking's Prides saw that a Chinese stock exchange at Shanghai might be useful as a dumping-ground for questionable treasury notes. The produce exchange plan was reserved for further consideration. Opponents, who had not been "seen" in the manner approved by Peking precedent, voiced their fears that the men behind the exchange might execute a "corner" of the food supply and put the people on short rations or none at all. Despite this unreasoning attitude, there is little doubt but that Dr. Sun would have carried out his ideas but for the *coup d'état* and the turmoil that ensued during Yuan's "Hundred Days" and Li's unsuccessful efforts to curb the militarist monstrosities.

Two years later, the story was abroad that "a certain foreign nation" was going to launch just such an exchange. Stimulated by the consequent alarm, sentiment was prepared for the experienced generalship of wise and good Mr. Yu. Many meetings were held, first in small and separate groups and, later, through a gradual process of fusion. There were difficulties, there were suspicions and strange hardships, but these merely steeled the resolution of the man who had taken hold of the job. He saw it through. Hats off to him and to China for a good piece of patriotic work, well done!

* * *

Dr. Sun Yat-sen and the Chinese Presidency

IT does not matter a copper piece whether or not Tuan originated the bright idea of booming Dr. Sun Yat-sen for the Chinese presidency. The fact remains that Dr. Sun is beyond question the one man in China under whom all decent Chinese might rally for the good of their country.

He is honest. He has kept his skirts clean while wading through the mud and rapids of Chinese politics. He did not make the conditions. He was forced to meet them. After all, he has done remarkably well.

Some of his socialist ideas are out of tune with the particular needs of the times, but actual office might tone them down. His splendid, practical preachments for a Chinese system of transportation have attracted world-wide attention. On many things,

he is level-headed; on all things, he is a man of purpose and principle.

The Chinese must choose their own president, but they could go further afield and fare much worse than they would if they put their united force behind Dr. Sun, a man in whom Diogenes would undoubtedly delight.

He is anti-militarist. That would be a wholesome international advertisement for China, just now.

* * *

Cut the Liaison!

IF a group of Mexicans and Japanese met at Tampico or Vera Cruz, listened to speeches denouncing "the greedy gringo" north of the Rio Grande, and the newspaper reports informed us that among those present was the Japanese consul or consul-general, what would be the effect upon Japan's best friends in the United States?

One can readily imagine how Mr. Hearst's young men would rise to the opportunity. Even from here, across the wide Pacific, our ears tingle with the tart things that imagination calls to the tongue of Senator Falls and we can see very clearly the handsome form of burly Bill Borah as he springs into the debate, rumpling those black looks of his and calling upon the shades of our fathers to come once more to Capitol Hill and gaze upon a Senate and a people ashamed and affronted. There would be an immediate demand upon the White House for the full facts of the case. The machinery of the state department would be set in motion. An apology, or at the very least an explanation would be in order. Japanese-American relations would suffer one more setback.

Deep down in the heart of every American lives a love of fair play. The nature of our history, the growth of our national consciousness, planted the seed in our minds and it has taken root in our hearts. Above all, we want to be fair. During the late unpleasantness with Germany, our government gave to our own and other people a fine example of fairness in dealing with an enemy in war time. The conduct of all our higher officials was superb. We would not hit below the belt, although more than once we were hit below the belt. We fought with a clear conscience and a clean heart. Excellent.

If it is important to be fair towards an enemy, it is no less important to be on the level with a friend. However distressing it may be to some shortsighted people in China, the United States of America is on terms of friendship with Japan. To the vast majority of Americans, our friendly relations with Japan are fully as precious as our friendly relations with China. Patriotism and public policy alike reprobate partisanship on our part in any quarrel that may unhappily and temporarily divide the two great Asiatic nations. Our own interest, our own honor, their interest and their honor suggest as our rôle that of the honest and capable peacemaker. When we intervene at all, let our intervention be on the level and worthy of our dignity as a proud and great nation.

Under the auspices of the American University Club, a tiffin was given at Shanghai on July 21 to Dr. W. W. Willoughby, former legal adviser to China, and to the members of the California Glee Club. The hosts were American and Chinese graduates of American universities. It was a happy thought to entertain a distinguished and personally likable American man of letters and the boys from Berkeley, good fellows and good singers. Also, it was the privilege of the guests to speak their minds about Japan or anything else under the Rising Sun.

That Mr. "Brick" Morse should volunteer to "spread a great deal of propaganda" is his business and his inalienable right. That Dr. Willoughby should charge Japan with keeping alive the fires of Chinese disruption is his own business and within his right. We question the accuracy and fairness of the statement, we regret for his own sake that Dr. Willoughby elects to align himself with Asiatic partisans. That, however, is Dr. Willoughby's own business. From our brief knowledge of him, we know him to be an American gentleman and we believe him to be sincere. There was a certain just man who came to Jericho—but that is another story.

That to a large extent the list of "among those present" at the July 21 tiffin looked like a roster of Shanghai "Jap Slappers" is the business of those who paid for and consumed the meal. Who pays the piper can choose the music. That this same list should include the name of the American consul-general at Shanghai is America's business. It is melancholy business. Unfeignedly, we regret that it is our business. We intend to make it our business, and to see it through to the end.

Says the careful and correct *China Press*:

"About 200 attended the tiffin. Among those present were United States Consul-General E. S. Cunningham; Executive Consul M. F. Perkins; Canadian Trade Commissioner J. D. Ross," etc., etc.

The presence of Mr. Ross is his own and his excellent government's business, and both are very well able to take care of themselves. Let us stick close to America's business and our business, and let us endeavor to give an example of fairness.

Of themselves, the remarks of Mr. "Brick" Morse would not be important. We mean no offense to a good Californian, who has been a welcome visitor to the Whangpoo. We are sure he will understand. Diplomatic etiquette is a sealed book to many of our officials. When a layman "slops over," he is to be excused.

With Dr. Willoughby, the case is very different. He is a famous authority on international matters, an international lawyer, a professor of Johns Hopkins, a former legal mentor to the Chinese president. He is expected to be familiar with the extreme delicacy of China's foreign relations. He has written a book about them. We have it, are at present reading it, and in due course will speak our mind about it.

We do Dr. Willoughby the credit to assume in advance a desire to be fair to his own nation as well as friendly to poor China, who needs all the good and real friends that she can muster. We are quite sure that he did not intend to be either indiscreet or mischievous. That his motives were wholesome and fine, we have no doubt. Nevertheless, we say to him that he committed a grave and most unfortunate offense against good taste and—what is infinitely more important—against the United States of America, when, in the presence of the American consul-general and the the American executive-consul at Shanghai, he

"pointed out the fact that China, as a republic, had not been given a chance in two respects.

"First. Foreign interference, especially Japanese intervention, which has been keeping the discord in the nation alive ever since the establishment of the Republic. This, however, Dr. Willoughby said, has one consoling feature—that is, it is arousing the people of China into increased feeling of self-determination and increased patriotism. Every outrage committed by foreign interference increases the feeling to a large extent," he said."—*China Press*, July 22, 1920.

We quite agree with Dr. Willoughby that "China, as a Republic, has not been given a chance." We go further than that. We hold that at no time, during the period of western contact with China, has China been given a chance. Japan was not given a chance. She took her chance in her own hands and, with American assistance, first, and later with decisive British assistance, she put herself where she is to-day. What chance had the Filipinos until we took the islands from Spain and gave their people the right and the opportunity to work and talk for independence? The Don shot or jailed Filipino patriots. We beatified them and put them in control of their own government.

Some of the things done by Japanese in China have been unspeakably bad. These things have been denounced by the ablest men in Japan. It is our considered opinion that the Japanese government and the Japanese people sincerely desire to help China, that they wish above all things a real friendship with China, that Japan can and is eager to do much to help China to get upon her feet. Dr. Willoughby may think otherwise. He is entitled to his opinion. He is the best judge of how well he knows the Japanese or upon what evidence he bases his assertions. The trade statistics and the regrettably confused state of Chinese feeling towards the miserable war of the *tuchuns* would seem to traverse one of his assertions. Still, be his statements right or wrong, is it the part of an historian to pick upon Japan? Is it the part of a high American international authority, presumably versed in the strict rules of our state department, to affront a friendly nation in the presence of two American officials of that department? Decidedly, it is not.

The incident constitutes a grave offense against the government and people of the United States. It puts a dangerous weapon

into the hands of Japanese jingos and weakens the hands of Japanese liberals, who are America's friends and China's friends. It was not a gentlemanly proceeding, nor a patriotic proceeding, and we do not have to be told that Dr. Willoughby is both a fine gentleman and a sturdy patriot. We like his real fondness for the Chinese republic and his hearty interest in Asiatic democracy.

We desire nothing less than to add to the unfortunate embarrassment of Consul-General Cunningham and Executive-Consul Perkins. They are good men and true. They impress us as conscientious and capable officials. We have no reason to suspect them of forming part of the foolish and wicked *liaison* that by gradual degrees grafted itself from the intriguing yaméns into the American diplomatic corps in China.

At first, that *liaison* was a natural and helpful one. Under the ample shirt-front of Anson Burlingame, it was an assistance to China and to all the treaty powers. In the days of Rockhill, it was beginning to grow dangerous. In these days, with circumstances reversed, it has become a positive menace.

We put this question to any honest American, and we do not fear the answer: Have we the right to act in China in a way that we would not tolerate from Japan or from any other nation in Mexico?

The parallel is a fair one. It does not concern the admirable and ancient civilization of the Chinese, who deserve and hold our friendship. It is based upon hard facts, as follows:

Contiguity,

National self-interest,

The domestic disorganization of both China and Mexico,

The presence of international interests,

Rampant, rapacious Chinese and Mexican militarism.

Other similar facts could be cited. These will suffice. Our plain duty is to give Japan a square deal in China, to be peacemakers and not meddlesome firebrands. We give unnecessary offense to Japan when American diplomatic or consular officials are paraded as part of the present active and vicious "Slap the Jap" organization. We commend these thoughts to American officials in China, to our state department, to the good scholar and fine gentleman in the White House, to the foreign relations committee of the Senate, and to the Congressional party coming to take a brief "look-see" at China and the Far East.

Cut the *liaison*! It is the worst menace to American peace in the Pacific.

A Nation in the Making

CHINA ought not to be judged by her noisy, unruly youngsters or by those military monstrosities, the *tuchuns*. The youngsters will improve with age and experience. The *tuchuns* will toddle, one of these days, after a real revolution or foreign intervention. There will have to be a real revolution or some sort of summary action by the powers.

When President Harding succeeds President Wilson, next March, there will be a man in the White House who will listen to friendly suggestion for concerted action to help China out of her present hole. Mr. Harding is a practical man. We are inclined to think that he will take a practical view of the state of affairs in China. He will, we think, realize that China's welfare is far more important to America and to the world than the false pride of the mandarins. He will listen and act.

There is but slight ground for hope that the Chinese will themselves realize the desperate nature of their case speedily enough to ward off international intervention. The proceedings of July do not warrant that hope. China is still without a real government. Such power as is exercised by Chinese hands is employed by militarists for their own fell ends and not for the good of the country. That is the distressing fact.

The finer, more thoughtful Chinese resent the misuse of power that has gone on since the Wuchang affair of 1911. They are counting the cost to China—the millions squandered, the concessions sold, the shame and injury that have been put upon the people. Will they get together and act for China? They may, but it is to be feared that they will hesitate too long.

China is a nation in the making. Her old machinery broke down. It was utterly out of date. It could not stand the pressure of contact with modern nations. New machinery has to be put in, and that will take time and enterprise and energy. China possesses the enterprise and the energy. She does not possess the time. Large bodies move very slowly and China is a whale of a nation in the making. Her very bulk is a temptation to the blubber-hunters and the bone-chasers.

* * *

The Failure of the Boycott

ON May 7, 1919, smarting from the slap in the face administered to the Chinese delegates at Paris, a mass meeting conducted by western-trained Chinese students at Shanghai declared a boycott against Japan: Nobody must buy from Japan, nobody must sell to Japan, nobody must pass the time of day to a Japanese, nobody must mention Japan or the Japanese without adding a good round swear to salve the wounds of a proud, pathetic and naturally peaceful people. The Shanghai demonstration, the looting of Tsao's house and the buffeting of Chang's thick head, the pronouncement of the boycott and the campaign of calumny that followed it, made much ado in a world that was bent and twisted and all tangled up after four years of war-making—in which China took no part—and over three months of peace-making in which China was rated as only two-fifths of a great power. "Keep up the boycott—a nation boycotted is within sight of surrender!" No less a personage than the Master of Mankind was fished and hooked by those convenient quotation points and made to appear as sponsor of the anti-Japanese boycott. Needless to say, wise Mr. Wilson would not soil his fingers by touching the Shanghai plaything with a forty foot pole. His quoted words were uttered in a decidedly different direction. That did not matter. Nothing mattered except "Slap the Jap," and it was not a time to make such nice distinctions as the respect due to the office of President of the United States. Hotheads and featherbrains who *kowtow* to an Old Hsu cannot be expected to understand the scruples of a real President or the pride of a real democracy. They are young. They must live and learn by experience.

Questionable though their methods, and apart altogether from the questionable character of their weapon and purpose, these Chinese Laodiceans did declare the boycott, and what is more they extended it to anyone, Chinese or foreign, who dared so much as to tell them that their act was indefensibly wrong. Not to sympathise with them was a mortal offense, not to cheer them a sin. They had taken the bitt in their teeth and were hellbent upon running their own mad course. And, now, what?

After all the oratory and the wild gestures, the cussing and contortions, the shouting and swearing, the solemn pledges and secret pow-wows, the boycott, ladies and gentlemen, is a fizzle and a fiasco. It was all froth and foam, with nothing substantial back of it. It outraged the salient characteristic of the Chinese people, the natural-born tendency to do business. So it fizzled.

Ye gods and little fishes, how the callow promoters of the anti-Japanese boycott must tear their hair, gnash their teeth and weep for very rage, as they read the highly interesting Chinese Maritime Customs report of Mr. F. S. Unwin upon the trade of China during 1919. For never before did Japan and the Japanese do such thriving business with the busy business-men of China. The total Japanese trade with China amounted to no less than 441,947,029 haikwan taels—imports h.t. 246,940,997, and exports h.t. 195,006,032, showing a handsome balance on the right Japanese side.

The *China Press* very sensibly observes:

"Notwithstanding the boycott we have heard so much about, China bought more goods from Japan last year than ever before. In 1917, Japan sold to China Tls. 221,000,000 worth of goods; in 1918, the figures were Tls. 239,000,000 and last year they were Tls. 247,000,000. How do the Chinese students and the other patriotic organizations that have been promoting the boycott against Japan account for these figures?"

The boycotters, of course, will not answer. They are too down in the mouth. They have advertised their folly to the ends of the earth. They have demonstrated their puerile weakness. The simple answer is that these noisy young men do not represent China. They have little or no influence among their own people.

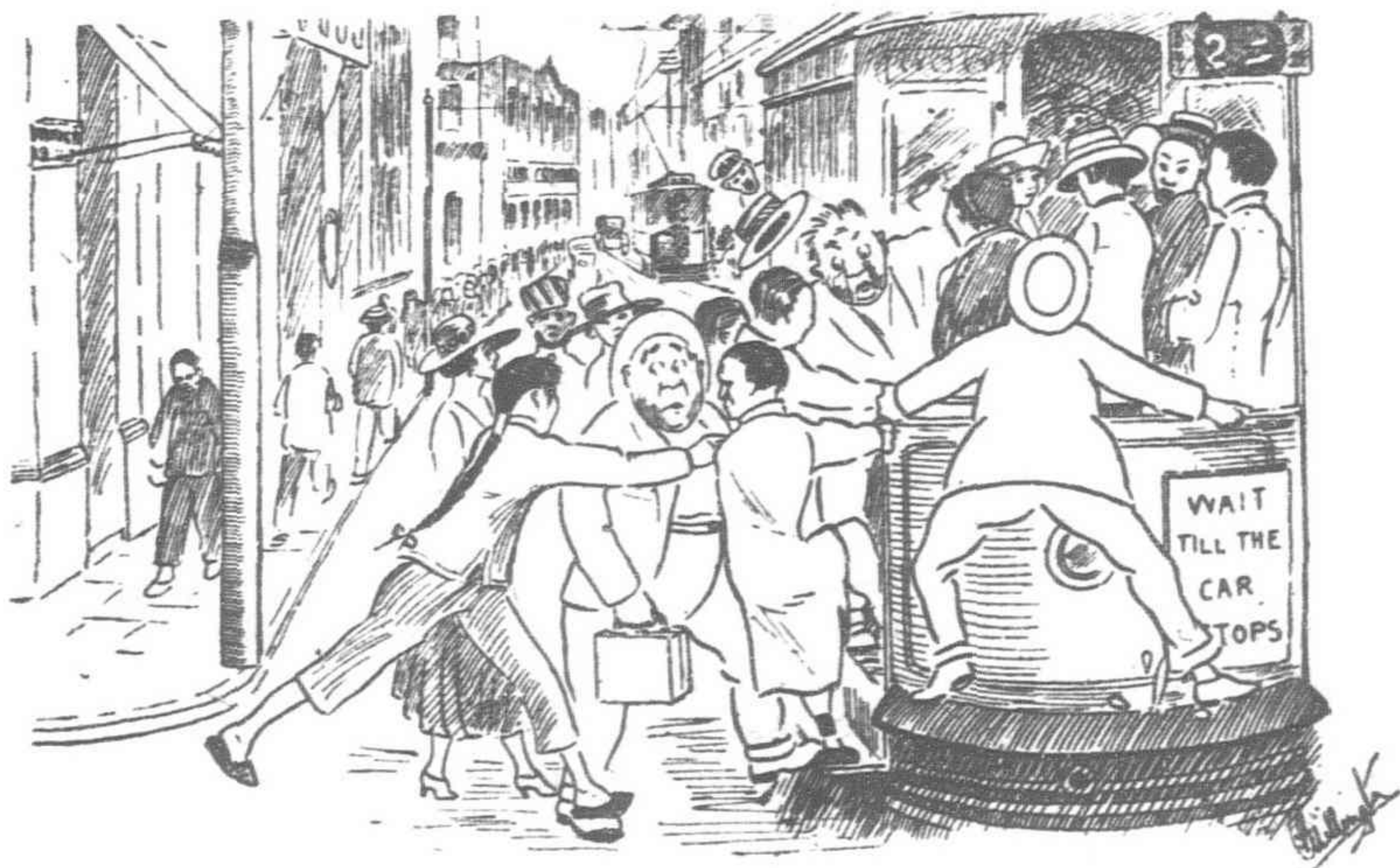
They might possess influence. They might play useful parts in the development of their nation. They could be a power in the land. Wind will not put them there. Wisdom would.

There is solid worth in most of these young men. We have watched them grow up and put on their long pants. They are just beginning to feel their oats. They will tone down, in time, and then they may give their mother, China, wisdom and not merely wind from the west. They may lead her out of the darkness into the light.

* * *

Roads to Chinese Peace

TWO of the illustrated features in this issue of THE FAR EASTERN REVIEW direct attention to China's chief need—modern transportation. Good transportation, good roads mean more and better lucrative employment, contentment, peace.



Rush Hour At Shanghai's Busiest Corner, Nanking Road and The Bund. From *The North-China Daily News*

Mr. Frank Rhea's notes on Far Eastern tramways are interesting and instructive. As he points out, only the surface is scratched, the opportunity is huge and immediate. The people are not merely willing, they are eager to help development. The old barriers have been broken down.

Sir Raymond Dennis is a fine type of the British motor magnate. The British motor manufacturers are wide-awake and going after overseas business. Sir Raymond's far-sighted policy is to be commended. In dealing personally with the immensely important problems of overseas business and local representation, he sets an example worthy of being followed by other *burra sahibs* of British "big business."

* * *

Sound Sense from the Old South

THE Macon (Ga.) *Telegraph* is one of the sturdy, influential newspapers of the Old South. Its opinions are not expressed at random. Under the caption, "Senators are Rebuked," this is what it says editorially in a recent issue:

"President Wilson has stated that out across Russia and the Orient lie questions unanswered. The multitudinous cults and castes of the East that divide families and set clan against clan are perhaps keeping them from being answered too quickly. Only the Japanese are alive to twentieth century opportunities and the value of modern education. The result is that the Flowery Kingdom has been called the Prussia of the Orient.—especially by some of our Senators who were arrayed on the Smith-Lodge side of the Shantung controversy.

"These solons—if that term can be applied in this instance—have evoked a sharp reply from the Pacific, and one that is worthy of some attention on this side of the Golden Gate.

"Marquis Okuma, former Premier of Japan, writing in a Honolulu newspaper, declares that, judging from the attitude of these Senators, 'we fear that America will invite calamities of a more serious nature than those which Germany provoked.' The 'Sage of Waseda' had the following to say in regard to what he termed the 'outrageous behavior' of our outspoken makers of laws:—

"The whole world arrayed itself against Germany that tried to rule the world with iron and blood. Japan, for the sake of humanity and justice, stood by the Allies and wrested Tsingtao from the Germans. She sent her warships to the Mediterranean and to the South Pacific ocean and Hawaiian waters to protect the Allies from the Hun menace. She protected the merchant ships of her allies and sent her sons to the Siberian front to fight the Germans and the Austrians.

"The United States and Japan made common cause against a common foe. The Ishii-Lansing Agreement was concluded with the object of guaranteeing peace in China and on the Pacific, with Japanese warships protecting America's island territory. The friendship of the two countries was probably at its zenith.

"But as Germany fell on her knees, the American feeling toward the Japanese suddenly changed. Responsible statesmen in the sacred halls of the Senate chamber boldly denounced Japan. They called Japan an aggressive nation, a warlike nation, the Germany of the Orient and an oppressor. They even went so far as to call Japan a robber who ought to be punished by force of arms. Their outrageous behavior was that of statesmen who knew no international courtesy. Never in the history of the world have I seen an instance where Senators of a country denounced a foreign country so vehemently as did the Senators of the United States in their speeches against Japan.

"Japan has announced many a time that she would restore to China the former German possessions in Kiaochow and that this restoration will be only a matter of time. But to return Tsingtao to China just on account of threats from the United States would be humiliating to Japan, who can and will solve voluntarily the question without any outside interference.

"There is no good reason why the United States should be the only country suspicious of Japan."

"The right-thinking people of the United States have so much to regret in the undiplomatic words of those Senators who are bitter against the present administration, that they will consider this just another of the wrinkles that have bobbed up on the map so recently smoothed out by the steam-roller of war."

Is there any good reason why the United States should be the only great power suspicious of Japan? Who would stand to benefit by a rupture between Japan and the United States? Not America. Americans should ponder this over and have some regard for the welfare of their own country.

* * *

Bread or Rice?

THE potent power of rice and abuse of power by rice profiteers, now being demonstrated in China and but recently manifested in Japan, quicken practical interest in the intention of the Japanese army chiefs to substitute bread for the traditional rice ration of the Japanese soldier. To some minds, this is the most radical departure in the way of westernization ever proposed in Nippon. We have always understood that the consumption of native rice approached almost to the nature of a rite in the Island Empire. Thus, to be asked to content themselves with imported rice amounted to an affront in the minds of patriotic Japanese. Japan is always surprising her friends (and her critics) and that is one of the chief secrets of her success. Says *The Herald of Asia*:

"The decision of a nation to change its food staples is a matter of no small interest; and in the case of Japan it only goes to show how true we are to our reputation for adaptation. Japan as a whole has not yet decided to give up rice for bread, but the army authorities are considering the subject and have already decided to replace rice by bread, in part, for the soldier's ration. Experiments, it seems, have proved to the satisfaction of the army authorities that bread is superior to rice as a diet both in tropic and temperate zones, and it is proposed to accustom the troops to bread. Of course the example of the army in this respect cannot but have considerable influence on the food habits of the people in general. Already the public health investigation office is taking up the question of rice substitutes in earnest and making scientific investigations with regard to a staple diet for the nation. The fluctuations to which rice is subject both as to quantity and price cause no small degree of inconvenience and even suffering in

Japan, and it is imperative that some substitute should be found, at least for periods of emergency. But what are the substitutes to be? That is no easy question. Potatoes, yams, corn and bread are all under consideration; and it is believed that a diet including these ingredients is equal if not superior to rice as a food. That indeed may well be the case. But who is going to give these substitutes the appetizing flavor and relish that rice invariably has for every Japanese palate? It is said that preference for, or aversion to, certain food is merely a matter of taste or habit. If the Japanese can be persuaded to regard the matter in this philosophic way, well and good; but we have our doubts. Still, we have adapted ourselves to so many new things in the last fifty years that to propose one more will not greatly alarm us."

It will not alarm the Japanese people, and it will interest American and European farmers, millers and exporters.

* * *

Far Eastern Steel Demand

RESALES of iron and steel tonnages ordered by the Japanese are declared to be the cause of a slackening in business, but the fundamental demand still is strong and will develop as soon as the Japanese trouble clears. The demoralization of the European market as a result of the Japanese resales is more marked than in the United States, especially in the case of tin plate. But prices there have been so high that such reductions as are now possible will not alter greatly the demand received by America. The immediate consequence has been the abandonment of high premiums. Some think this portends a gradual reduction in prices while others anticipate a renewal of the foreign demand in such a volume as to result in premiums again in several months.

The Japanese resales in a measure have assisted some exporters, because of the great scarcity of material that was evident as a result of the railroad strike.

* * *

Chemical Exports to Japan

THE export of chemicals from the United States to Japan is shown to have reached large proportions, and that it is increasing every month, reports agree.

Before the war, Japan, like almost every other country, was receiving its chemicals from Germany, with some quantities from Great Britain. As an instance, in 1913, more than 99 per cent. of the caustic soda ash imported by Japan came from Great Britain, while only 1 per cent. came from the United States. In 1918, the last year for which complete figures are available, the United States supplied 71 per cent., Great Britain 21 per cent. and other countries 8 per cent.

The principal industrial chemicals imported into Japan in 1918, with quantities and values were:

Salicylic acid, 520,413 pounds, valued at \$619,172; carbolic acid, 2,974,425 pounds, valued at \$1,553,048; caustic soda, crude, 15,481,384 pounds, valued at \$1,628,268; soda ash, 125,150,898 pounds, valued at \$125,150,898; bicarbonate of soda, 7,390,363 pounds, valued at \$345,132; nitrate of soda, crude, 108,678,979 pounds, valued at \$5,647,305; cyanide of soda, 1,589,256 pounds, valued at \$549,199; nitrate of potash, 1,177,346 pounds, valued at \$152,083; sulphate of ammonia, crude, 2,419,200 pounds, valued at \$153,483; borate of soda, 2,367,684 pounds, valued at \$224,340; acetate of calcium, 1,379,404 pounds, valued at \$107,185.

Of these, from 60 to 70 per cent. were entered at the custom houses of Kobe and Osaka. A large number of industries using chemicals in their processes—such as glass, porcelain, match, fertilizer, dyestuffs and soap factories—are situated in the districts surrounding these two cities.

Vegetable Oil Situation

THE world supply of vegetable oil has been the subject of careful study during the past three or four years, and strenuous efforts have been made for the control of sources of material. If present plans proposed by the Lever Bros. firm are carried out, one result would apparently be that of practically assigning the South Pacific field to the English interests while the Philippines and adjacent oil producing countries would be drawn upon for the materials needed in the United States.

The Dutch East Indies may be a kind of neutral ground from which oil material and oil itself may be drawn by any buyers who can obtain them.

Within the past few years there has been an effort to develop the Philippine oil field, with the result that large quantities of oil producing machinery have been purchased and installed. According to recent estimates made by experts who have investigated the situation on the spot, the oil plants now in operation in the Philippines have a capacity of about two and a half times the entire local output of copra in the islands. There has also been very great development in the oil business in Japan and much of the Japanese product has been sold in the United States. Large profits made in the trade, early in the war, have accelerated the process of developing the industry in the Orient. The opinion now prevails in trade circles that both Japan and the Philippines are considerably "overmilled." This makes it necessary to obtain a great extension of cocoanut production or else to open up new sources of oil-producing material. The latter effort is being made on a large scale in Java, with the use of foreign capital, it being sought to domesticate the palm nut and other oil producers which have flourished largely in Africa. There is already a considerable output of these oil producing materials in the Dutch East Indies, and the current attempt is to increase it very largely. Extension of the cocoanut raising area will, however, be essential in order to furnish raw material for existing mills already installed in the Orient. Reports from the Malay Archipelago show that cocoanut producers are well aware of the situation and are getting exorbitant prices for their output. The result is to enhance the cost of production of soap, nut butter and other products.

A Peking "war" correspondent says "Marshal Tuan is overcome by grief." He means "greed."

No, we don't know whether a boycott has been declared against reading the Chinese trade reports. Wouldn't wonder.

China might do much worse than root for Sun. He is honest and what China needs, above all things, is an honest man at the helm.

More motors and trams; less militarism and toddle *tuchun*.

Our Congressional friends may not see much of China, but it's a lakh of Kuping taels against a battered cash piece that their ears will be sore after they pry themselves loose from the busy "whispering chorus." Propaganda's the thing. Everybody's doing it.

Bryan has refused to run. Sounds fishy. And a "wet" platform, too! Bet Old Bili has something sharp up his sleeve.

Monsieur Paul Painlevé will have much to tell the French when he returns from Peking to Paris.

Is there any good reason why the United States should be the only great power suspicious of Japan?

In Memoriam: J. K. OHL

LAST month, it was our painful duty to write of the death of Dr. George E. Morrison. In doing so, we referred to his only peer among the penmen of the Far East, Josiah Kingsley Ohl. Now, Ohl, too, has gone to join the "Old China Hands" in the happy valley beyond cloud and shadow. Peace, reason and justice in Asia have lost one of their best and most powerful friends.

Had he been spared to us, he would have come out once more to the Orient to report facts as he would have found them and to confound the mischief-making propagandist. He was well aware of the ramifications of dangerous combinations that threaten the peace of the Pacific, and he heard the old East calling to him and felt its tug at his elbow. American editors, worried and made suspicious by queer tales emanating from the Orient, were looking to Ohl as the man among men who could be depended upon to tell the story fairly and fully and fearlessly. Ohl knew the East and he was the greatest American Far Eastern reporter of all time.

He was the last editor of *The New York Herald*. He was the ideal editor—honest, friendly, fair, courageous for the right. He led the editorial battle against the anti-American features of the Pact of Versailles as he had led the editorial campaign to bring America into the war. He was the devoted friend of our European friends and the relentless foe of our foes. In his most enthusiastic moment, he was scrupulously fair and gentlemanly. That was his nature.

As Bennett's personal representative and, later, as the successor of the kindly "Commodore," "Joe" Ohl was loved by every *Herald* worker. You could always depend upon "The Chief." No government could coerce or cajole him, no interest or individual could come between his men and justice. He typified the *Herald's* scorn of place or privilege.

During the war, a certain high official of the Wilson administration expanded his chest unduly and ordered a *Herald* reporter to handle a story in a certain way, including much incense made and burnt personally by the official person in his own honor. The *Herald* man handled the story in the *Herald* way, tossing the perfume into the waste-paper basket and telling the painful truth about the official person. Now, that made the official person mad. He raced over to the White House and demanded the head of the reporter. The White House, very foolishly, wrote to the *Herald* asking for the dismissal of its "insubordinate representative." Mr. Ohl sent a properly tart reply and presented the correspondence to the reporter as an interesting souvenir of good work done in the line of duty.

During the peacemaking at Paris, a *Herald* reporter told what the President had said about "the freedom of the seas" and other things. He was ordered into "coventry" by the great Moguls of the Crillon. The writer told him not to worry—that Mr. Ohl would stand by him in his own, the *Herald* way. He did, to be sure. He always stood by his men.

He always stood by the truth.

The professional "Jap Slapper" could never get under the guard of "Joe" Ohl. Mr. Ohl knew and understood Japan and China. He was China's real friend, and he was just as much the friend of Japan.

One day, during the war, we were discussing some Far Eastern news in the office of the Washington bureau, opposite the Shoreham Hotel. A perennial assailant of Nippon was casting doubts upon Japan's Kiaochau promise.

"Japan is a gentleman," said Mr. Ohl, very quietly; "and a gentleman always keeps his word."

During the course of the writer's service for the *Herald* as its special Far Eastern correspondent, we were constantly in close touch with Mr. Ohl. Not once did he issue an order or suggest an opinion. He riddled the Fourteen Points by his rich and reasoned editorial ridicule, yet he featured Paris dispatches from the writer pointing out that it was "either the Fourteen Points

or arm to the hilt." He was never so pleased as when a man in whom he had faith challenged his own editorial opinions with a dispatch true to the news. That was the way he had worked himself all over the world for Bennett. That was the way he won his unrivalled reputation in the East.

His stories from China of the *Tatsu Maru II* fiasco in 1908, are models that the younger men of to-day would do well to copy. He saw the importance of the affair—its American as well as its Asiatic importance. Boycotts, like curses and chickens, come home to roost.

Mr. Ohl's death is an international calamity. It is not too much to say that he could have done more for a real, intelligent, durable Pacific peace than all other Americans combined. He had the great advantage of a pure heart, a wise and clear head, a powerful pen and prestige in Asia and America as the right kind of reporter. Now, all that is needed for peace and good will on the Pacific is the right kind of reporter—the reporter who will tell the truth, all the truth, and nothing but the truth. That sort of reporter can do more for America, Asia and the world than all the diplomats and deacons that ever split a hair or tortured a text.

In international matters, justice is seldom all upon one side. And justice is never served by passion or prejudice. Josiah Kingsley Ohl put his foot upon prejudice wherever he found it. Long resident in the old South, he understood race questions. His viewpoint was sound and just.

He was a great American, a fine scholar, a lovable character, a true friend—always thinking of others and for others. Providence was kind to him in giving him his Atlanta bride, the talented and charming authoress, Maude Annulet Andrews, whose sorrow may be assuaged in part by the sympathy of her many friends in the Far East. His home life was beautiful. His daughter, Joan, but recently married to Mr. D. Frank Webster of Manila, was a real chum and aid to the famous reporter and editor. He was very proud of her and justly so, and this old-fashioned American family fondness was a real help to the large and really well-behaved *Herald* family. It shed its sunshine over a great newspaper organization.

Mr. Ohl was born at Brownsville, Pennsylvania, the eldest son of a clergyman, Dr. John Franklin Ohl, and a devout and scholarly mother, Louisa West Ray. He was educated at Kenyon College, Ohio. He began his newspaper work on the staff of the *Atlanta Constitution* in 1887. Thus he met Mrs. Ohl, who won her first fame as a *Constitution* woman writer. In 1896 he was chosen as the Washington correspondent of the great Atlanta daily and his work at the capital won national and international notice. James Gordon Bennett appointed him to the New York *Herald* bureau and about the same time he became correspondent for the *London Daily Telegraph*. He made a trip around the world for these newspapers and thus he came first to the Far East. In 1907, he returned to Asia as the correspondent of the *Herald*, covering Japan, China, Korea, the Philippines and India. He made his headquarters in Peking but he followed the news and kept pace with it all over Asia. In 1913, he returned to the home staff of the *Herald*, dividing his time between direction of the Washington bureau and taking charge for Mr. Bennett at New York. After Mr. Bennett's death, he had complete direction of all the *Herald* properties, including the Paris edition. He wore himself out by his loyalty to duty and he went on a brief vacation shortly after Mr. Frank A. Munsey purchased the Bennett newspapers.

For his superb services to the Allied cause he was made a chevalier of the Legion of Honor of France, commander of the crown of Italy and knight grand cross of the principal order of the Hellenes. He was a redoubtable friend of the Greeks and Premier Venizelos sent him through the writer a warm message of appreciation and remembrance. In 1901, his *alma mater* made him A.M., *honoris causa*; and in 1917 he received his doctorate of laws from Kenyon side-by-side with Governor Cox, now nominated

for the presidency of the United States. He might have been minister to China after the resignation of Dr. Paul S. Reinsch.

Hon. Franklin D. Roosevelt, now nominated for the vice-presidency on the Democratic ticket with Governor Cox, was one of several influential members of the administration who believed that Mr. Ohl should represent the United States at Peking. Mr. Ohl was not a candidate. All he knew about the "boom" was what he was told by the writer. He was humorous about it, as he always was about personal matters. Undoubtedly, he would have made a great minister.

Often, he was called "Colonel" Ohl. Once, at the National Press Club in Washington, we teased him about it. Of good fighting stock, he had the spirit of the soldier, much knowledge of army work and lively interest in American preparedness. In Kentucky, of course, all leading citizens are "colonels," but Georgia is more conservative in the bestowal of military rank. Also, at that time, a quadrilateral political duel was being fought by those famous "Colonels" of Wilsonian intimacy and later enmity, "Colonel" Waterson, "Colonel" Harvey, "Colonel" Bryan and "Colonel" House.

"How about it, Joe?" the late William P. Spurgeon asked; "is it real or just one of those campaign colonelcies?"

Ohl smiled all over his face. He enjoyed the fun.

"It's Georgian," he said; "real Georgian. Back in 1902, the governor of Georgia made me lieutenant-colonel on his staff. Ever since then, I have been trying to live it down, but it sticks to me like a leech. That's the mischief of these political colonelcies."

He was a valued member of the American Asiatic Association and a generous contributor to several oriental organizations, a fellow of the Royal Geographical Society and a popular member of many clubs including the Gridiron, the National Press, the Peking, Delta Kappa Epsilon and the American College Club of China.

When we parted from Mr. and Mrs. Ohl, in New York, in April, he was fighting bravely to recover his shattered health and still sticking to his desk as the editor-in-chief of *The Evening Telegram*, which survived the *Sun-Herald* merger. He looked somewhat improved by his brief rest at Atlantic City. We had quite a merry party at the Waldorf-Astoria, the Ohls as our hosts and Mr. and Mrs. Rea joining them in wishing us "godspeed." It is hard to think that chief and friend must live on merely in memory.

Yet, there is a big lesson in the very thought. How fine a thing it is to leave to others only pleasant and profitable memories! How precious a jewel is genuine friendship! China and Asia have many millions. The good reporter, who lived and moved and worked among them, took back with him to his own country and his own people many pleasant and profitable Chinese memories. He really loved them. He liked to write kind and useful things about them, because it was his nature to be kind and useful, too.

One of the happiest and most wholesome signs in China, today, is the birth of a modern vernacular press. It is the birth of public opinion in China. There cannot be a real republic in China, or really respectable, responsible government in China, until there is a healthy, wholesome Chinese press. We are quite sure that the editors of Young China will remember with real affection their good friend, Mr. Ohl. It will help them in their difficult and useful work to study the work and emulate the worth of the great, good man who has written his last story and read his last proof. We know no editor of our time whose character and career make a stronger or better appeal to their own finer qualities. Ohl and Morrison can best be honored by the press of Young China in a serious attempt to write as they wrote, live as they lived, and die as they died, pleasantly and profitably remembered.

P. G.

Japanese Capital Investments

Capital invested in banking and other forms of business in Japan during the first five months of 1920 aggregated Y.2,159,400,000, according to investigations conducted by the Bank of Japan. For the various lines of businesses for the period and

of the same period of the four preceding years, the figures, on a million yen basis, show:

	1920	1919	1918	1917	1916
Banking	201	49	29	39	8
Trust and Monetary	110	7	—	—	—
Warehousing	36	—	—	—	—
Insurance	11	6	—	—	—
Mining	178	62	108	52	22
Electrical	199	40	—	—	—
Shipping and Railways	150	54	88	53	10
Manufacturing	679	183	193	220	78
Fishery	9	4	3	1	—
Agriculture	54	8	15	2	—
Commercial	528	123	219	63	16
Total	2,159	543	658	432	137

The figures for shipping and railway concerns in 1919 and 1920 comprise Y.105,000,000 for railroads and Y.27,000,000 for shipping, while Y.18,000,000 is for transportation, and is business other than railways and shipping interests. The similar figures for last year include Y.17,000,000 for railroads, Y.27,000,000 for shipping and Y.10,000,000 for transportation businesses.

Manufacturing industries for 1920 and 1919 are classified as follows:

	Jan.-May 1920	Jan.-May 1919
Spinning	109	10
Weaving	77	31
Chemical	97	37
Mechanical-Engineering	86	20
Shipbuilding	4	3
Ceramic	36	24
Metallurgic	32	12
Provision Manufactures	97	43
Miscellaneous	135	—

The total amount of registered capital of all extant banks and corporations at the end of last May was recorded as totaling Y.12,266,950,000, the figures showing traces of yearly gains as compared with Y.3,827,960,000 at the end of 1916, as may be seen from the following table, the figures being on a million yen basis:

May 31	Banks	Other Enterprises	Total
1920	1,877	10,389	12,266
1919	1,680	8,484	10,164
1918	1,363	6,387	7,750
1917	1,175	3,992	5,167
1916	1,002	2,825	3,827

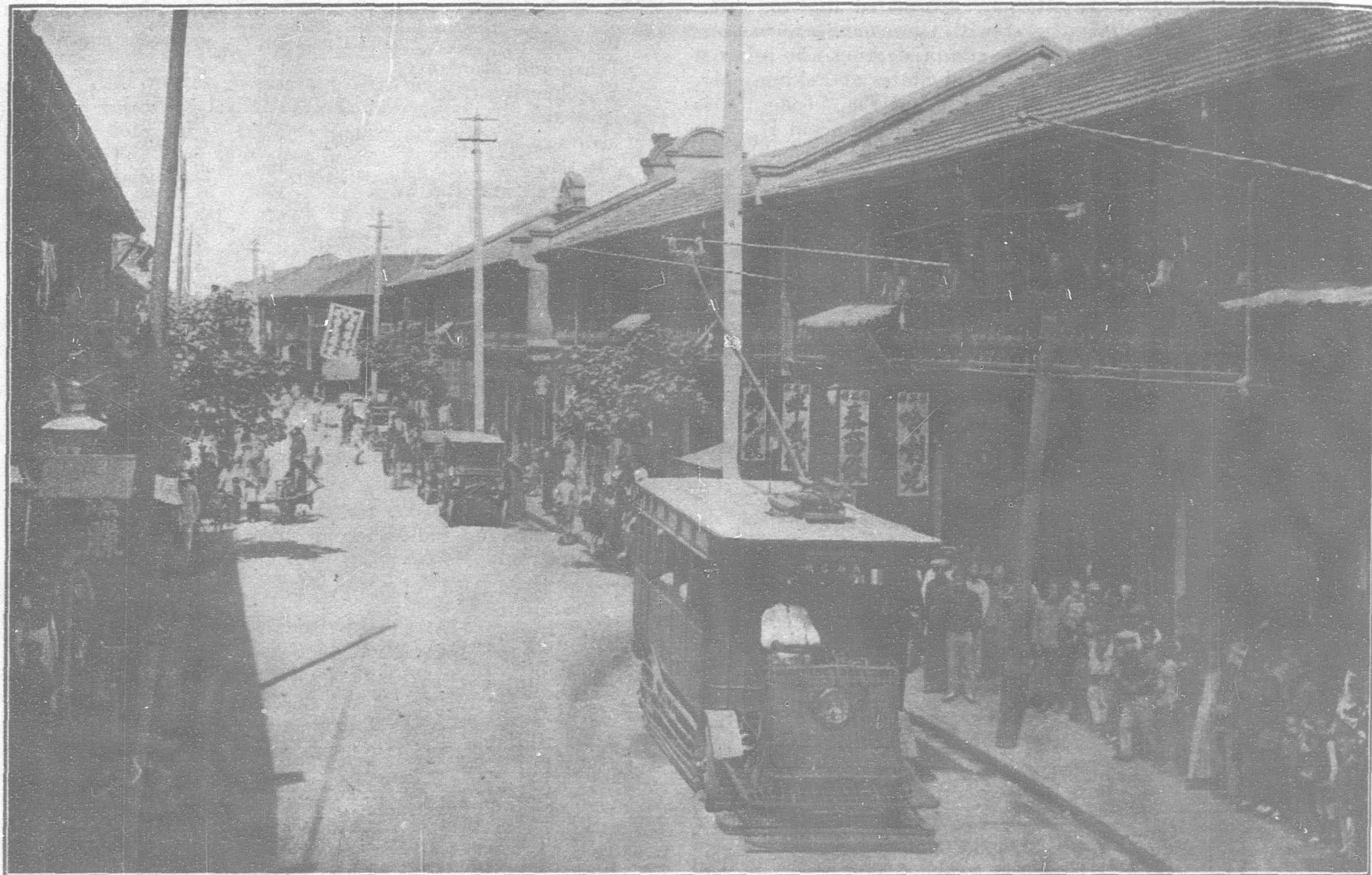
The River Conservancy Board of Kwangtung has submitted plans to the provincial authorities as well as the estimates for the dredging, etc., of the various rivers as a prevention against future floods. The statements of the estimates are briefly as follows:—

The West River	\$19,500,000
The North River	10,900,000
The East River	4,600,000
Total	\$35,000,000

It is estimated that if a sum of \$2,000,000 be raised in one year, it will take fifteen years to complete the proposed work.

"It is estimated that of the world's population, 500,000,000 are completely clothed, 750,000,000 partially clothed, and 250,000,000 not clothed at all; and it is calculated that the cotton industry supplies nine-tenths of the clothing worn by that portion of mankind which is clothed." These are some very striking facts pointed out by Sir Charles Macara in some comments which he made on the recently issued report of the (British) Empire Cotton Growing Committee.

Relative Road Space—The Ricksha and the Railless Car



One Railless Car, Seating 28 Passengers and Occupying about 158 sq. feet of Shanghai Roadway



The same Shanghai Street Congested by Rickshas, 28 Occupied, 9 Unoccupied, Filling about 2,565 sq. feet of Shanghai Roadway—
Over 16 Times the Space Needed by the Railless Car

The Tramways of the Far East

By Frank Rhea (Trade Commissioner, U. S. Department of Commerce)

From Special Agents Series, No. 180

THE number of tramways in China is very small, there being only eight sets of lines altogether, including two in Manchuria. With one exception, all these are located, either partly or wholly, in foreign concessions. The exception is the tramway in the Chinese city of Shanghai, which has much of the characteristic environment of a foreign settlement.

The riding on tramways, so far as they exist in China at present, is largely confined to the ordinary class of Chinese. Wealthy Chinese and foreigners of all classes are seldom seen in the street cars, but, as a rule, travel in jinrickshas or other conveyances. There has seemed to be a growing tendency recently on the part of the less well-to-do class of foreigners to ride in the tramway cars, particularly in Shanghai, but the proportion of foreign passengers on all lines is very small and practically all foreigners ride first class.

Tientsin Tramways

These tramways are operated by the Compagnie de Tramways et d'Eclairage de Tientsin, Société Anonyme, with headquarters in Brussels, Belgium. Head office in China: Tientsin. Cable address: Tsintram. All the following officials are located in Tientsin:

General Manager	...	...	...	...G. Gaillard.
Chief engineer	...	...	...	...G. Rouffart.
Traffic and road manager	...	...	...	...F. Lahaye.
Mechanical engineer	...	...	...	...N. Vrancken.
Chief accountant	...	...	...	...A. Paternoster.

There are about 8.2 miles of this system, located in the French, Japanese, Russian, Italian, and Austrian settlements. Service was first established in 1906. The track is of meter gauge, and the rail is all grooved girder weighing 46 kilos per meter (92.8 pounds per yard). One particularly interesting feature of the construction of this track is the fact that no ordinary ties (sleepers) are used, but that, instead, the girder rails are laid on beds of broken stone 15 inches deep and 18 inches wide. The rails are held together with 12 tie rods for each set of rails 18 meters (59 feet) long, or one tie rod for each 5 feet. These tie rods are very robust and securely fastened to the web of the rail. After having had this construction explained, the writer took particular notice of the line and surface of this track at different points and was much surprised at its good average condition, which seemed to confirm the statement of Mr. Gaillard (the general manager) with regard to the satisfactory results given by this construction.

The rolling stock consists of 64 double-motor trolley cars and 50 trailers, all of Belgian design and manufacture. Figures 32 and 33 show a motor trolley car and the ends of two trailers. This company also furnishes the electric power for Tientsin. The total capital is 6,250,000 francs (\$1,206,250 United States currency). This investment is about equally divided between the tramway and electric plants. The gross tramway earnings for 1915 amounted to 64,524,183 copper cents, which, reduced to Mex. dollars at an average of 130 cents to the dollar, made about \$496,800 Mex.

First-class and second-class fares are charged to men, but

Chinese women are allowed to ride first-class by payment of second-class fare. The second-class passengers are handled almost entirely in the trailers. Practically all foreigners ride first-class when they ride at all. All rides are on a single-fare basis. Part of the lines have a 2-copper-cent fare, the maximum distance being 3 kilometers, or about 1.9 miles. On the other routes 3-copper-cent fares are charged for a maximum ride of 5 kilometers, or about 3.1 miles. One very interesting feature of this system is that the amount of travel varies with the character of the season and the day. On fair days the daily collection averages about 250,000 copper cents, but on wet, disagree-



Foreign Settlement Trams (Shanghai)—The Wayside Car Shed

able days the collection sometimes falls below 100,000 copper cents. These figures seem to indicate that, notwithstanding the industrious habits of the Chinese, a very large part of the riding of these lines is for pleasure (or at least convenience) rather than travel to and from work.

This is purely a Belgian concern; all materials and equipment conform, in general, to Belgian practice and are usually of Belgian manufacture. A good many purchases are made from concerns in Tientsin, and at present requirements are bought from whatever source they can be secured; but, upon the return of normal conditions, no doubt preference will again be given to materials from Belgian sources when these are again available.

Shanghai Tramways

These tramways are operated by the Shanghai Electric Construction Co. (Ltd.). Head Office: No. 2 North Soochow Road, Shanghai. All the following officials are located in Shanghai:

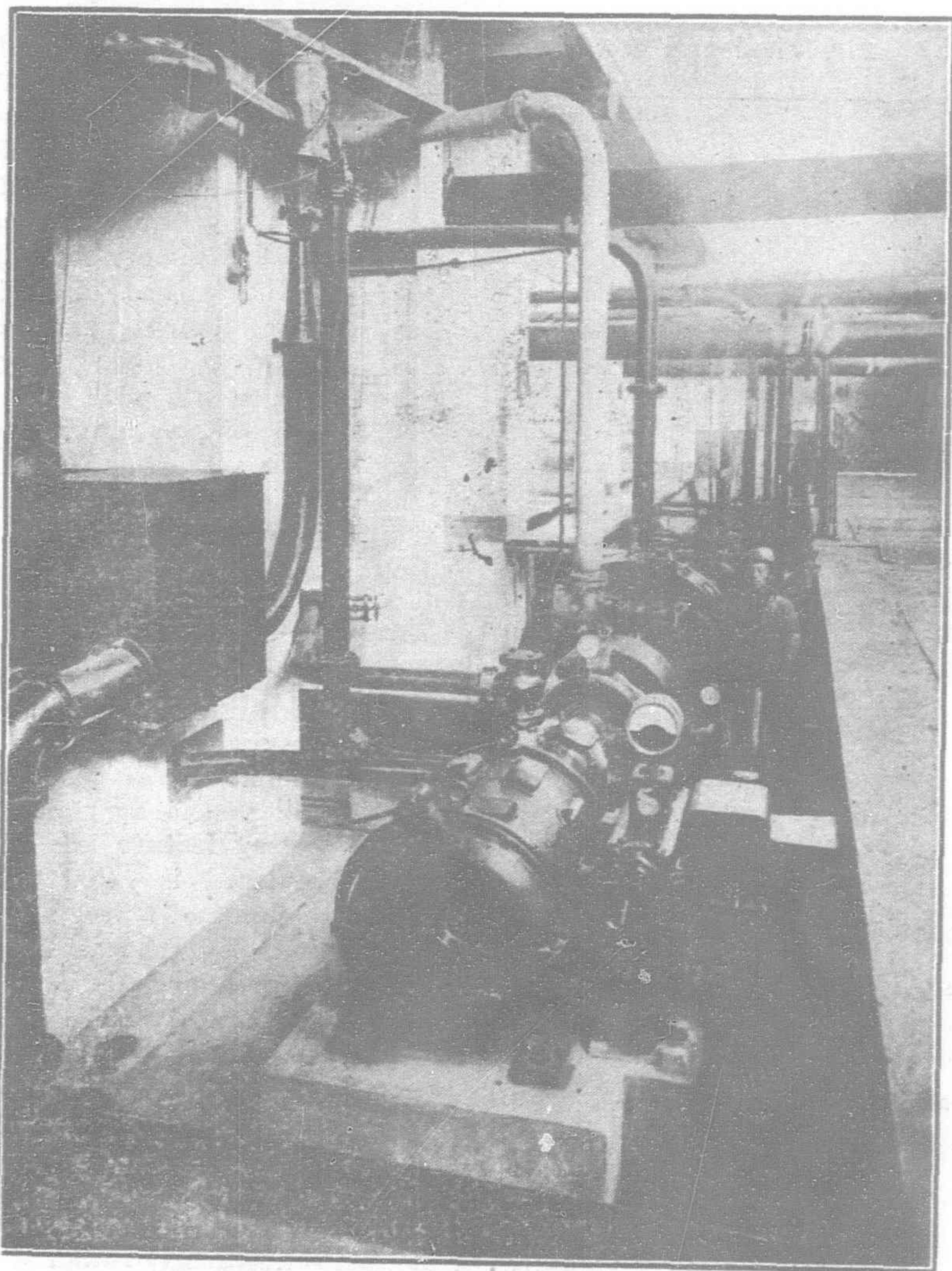
General manager	...	...	...	...Donald McColl.
Deputy manager	...	...	...	...J. G. Smeaton.
Traffic manager	...	...	...	...E. Carroll.
Rolling stock superintendent	...	...	...	...J. L. Gerdon.

Assistant rolling stock superintendent ...H. G. Sadler.
 Line engineerH. J. Blatchford.
 Assistant line engineerT. H. Brownlie.
 StorekeeperJ. L. Stuart.

Secretary in London: L. W. Hawkins, Basildon House, Moorgate Street, London, E. C.

The lines of the Shanghai Electric Construction Co. (Ltd.) are located in the foreign settlements (except the French) in Shanghai—or what is otherwise known as the International Settlement of Shanghai. The total length of the route is about 16.45 miles of rail lines and 1 mile of railless trolley.

All the tracks of this company are substantially constructed and well maintained. The rolling stock consists of 90 motored trolley cars, 70 trailers, and 7 railless trolley cars. Part of the power is generated in the company's own powerhouse and part is purchased from outside.

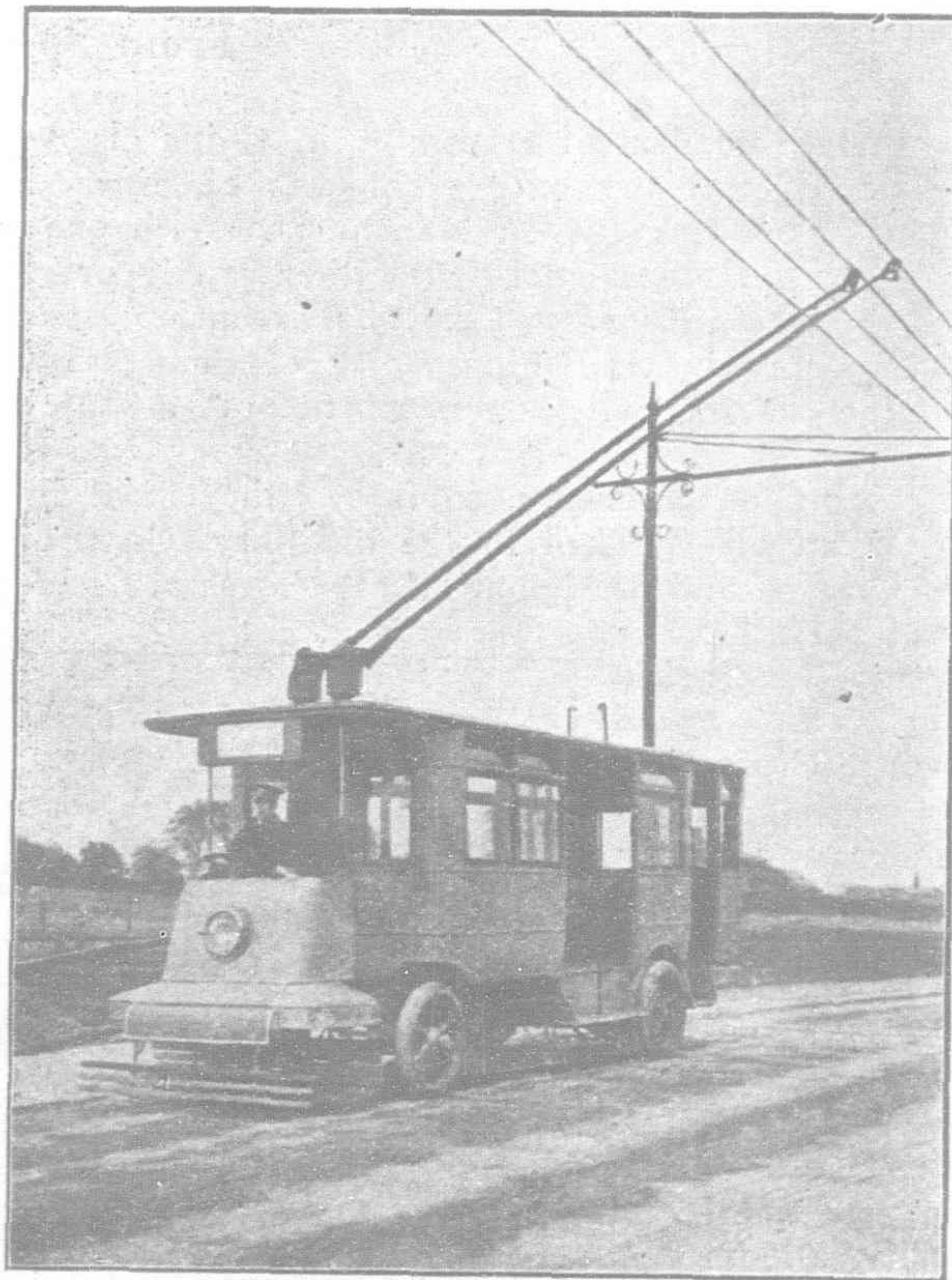


Tientsin Tramways Condensing Plant.

The total share capital of the company is £320,000. For the year ended December 31, 1917, there was a net profit of £49,510 and, after the appropriation of £10,000 for renewals and £5,000 for writing down the preliminary expenses account, 10 per cent. dividends were paid on the above share capital. These results show the possibilities of tramways in China where the developments are followed up from year to year by capable and enterprising management.

First and third class (no second-class) fares are charged, but Chinese women ride first-class on payment of third-class fare. There is an arrangement of zone fares, the first-class fare for each zone being 3 copper cents. When fares are collected passengers are given a special number and colored slip. There are frequent instances of 'surprise' checking by special inspectors, as a part of a very carefully worked-out and maintained scheme to eliminate "squeeze," or "graft." It is claimed that this has been reduced to a very low point by the arrangement indicated.

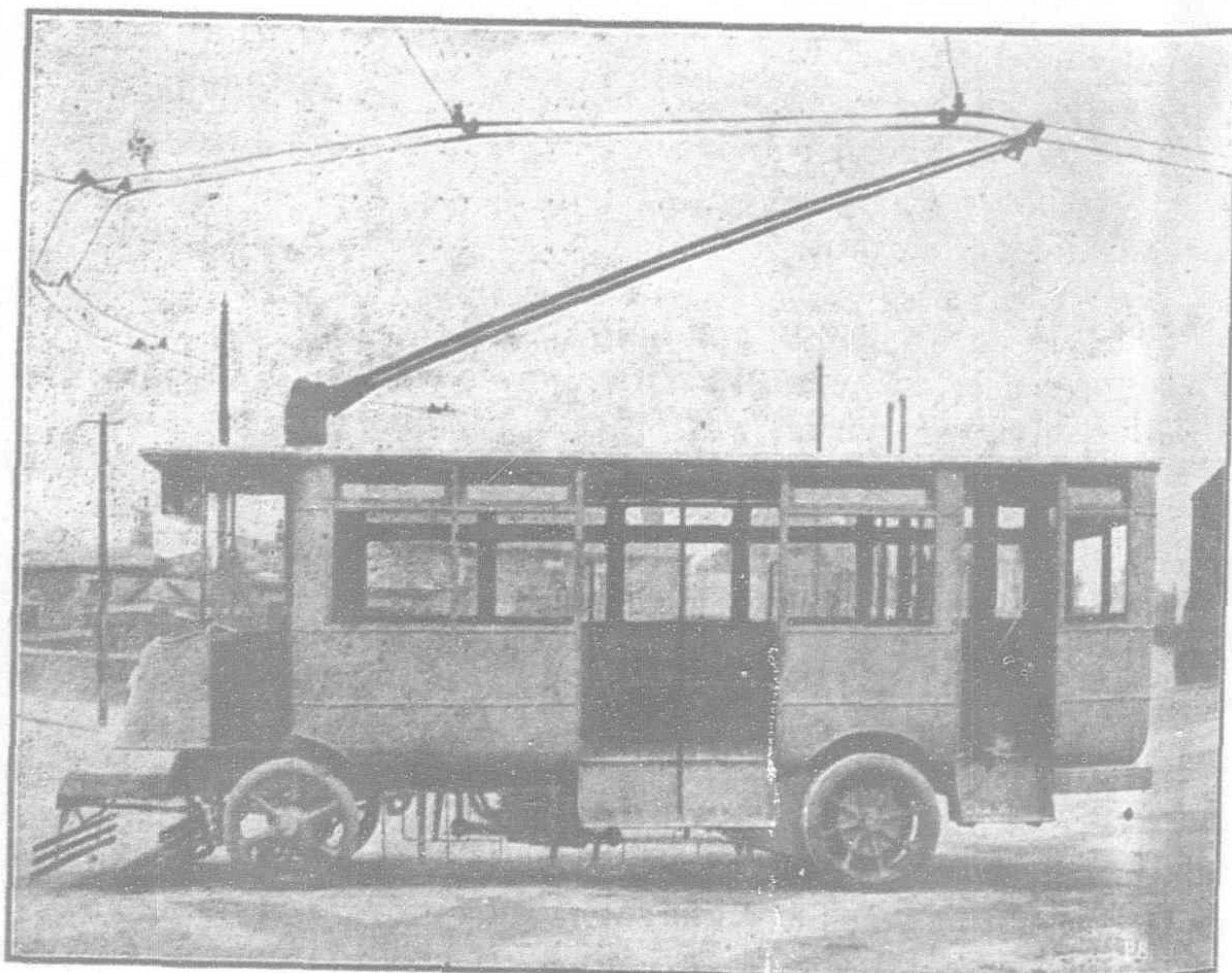
There is at present a very successful and well organized railless trolley, with a route of a little more than a mile, running through a very congested district. The service was first established in 1915 over a route of about seven-tenths of a mile, and was extended in 1916 to the present length. This service was objected



Foreign Settlement Trams (Shanghai)—One of the New Railless Cars

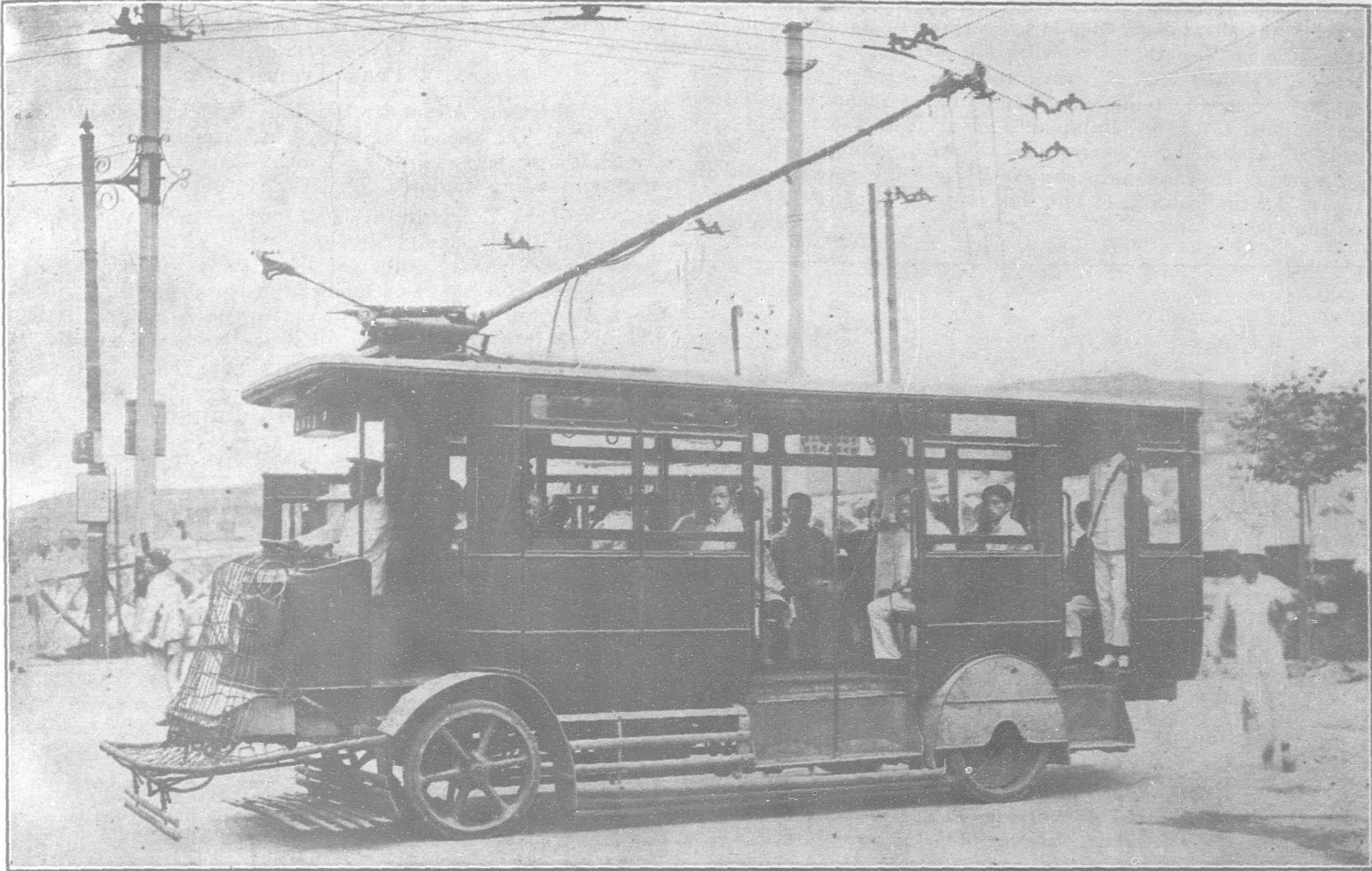
to at first by the municipal police authorities, who give a great deal of attention to keeping traffic moving in the congested districts of Shanghai; but as a result of the successful operation of this equipment their attitude has become favorable and the Municipal Council has been considering a proposal for a very considerable extension (about 9 miles) of this railless trolley service.

In the statement presented to the Municipal Council the claim is made that these cars occupy an area of 158 square feet while 28 jinrickshas carrying the same number of passengers would occupy 2,500 square feet to permit of proper movement. This means, practically, that at least two of these railless trolley cars would have ample running space in one of these narrow



Foreign Settlement Trams (Shanghai)—The Railless Car

The Railless Car in Shanghai

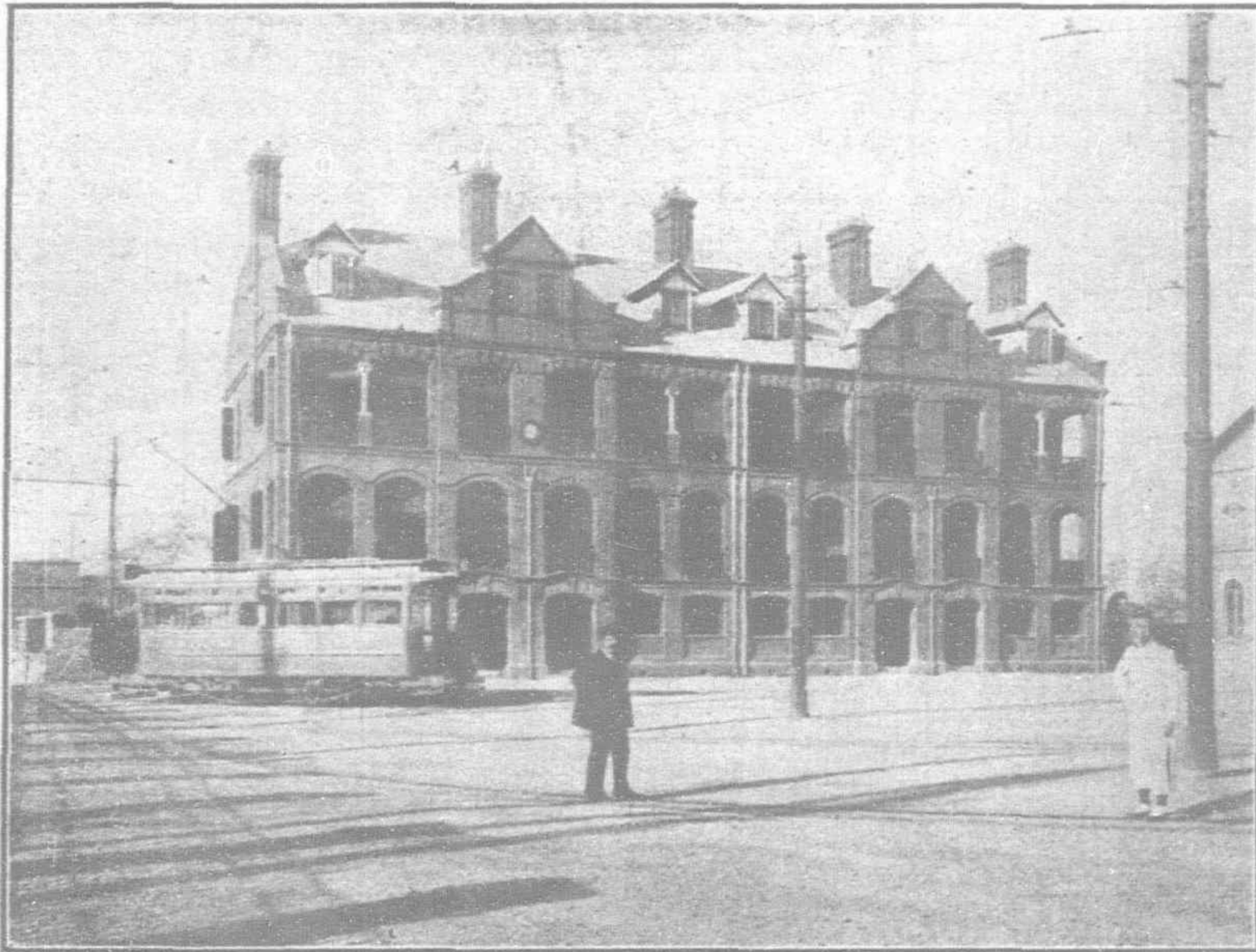


Turning a Sharp Corner



Interior of the Railless Car

streets and still permit the movement of other traffic, whereas the 28 jinrickshas would completely occupy the street without allowing other traffic to move. The average cost of the seven cars now in service was about Mex. \$12,850 for each complete equipment, and the actual cost of the present installation, including the double trolley, was Mex. \$137,575, which included a contribution of Mex. \$26,022 for street paving. As no additional land or buildings were added to the general plant, an arbitrary amount of Mex. \$10,000 was added for determining return on capital. The detailed working expenses have been very carefully watched, and the results for the last half of 1916 show a profit of about 15 per cent. on the investment.



Dwelling Houses at Lokawei for the European Officials of the French Tramway, Shanghai

The tire renewals were estimated at Mex. \$0.03 per car mile, but have since been determined as less than Mex. \$0.024. The mileage for tires will average more than 25,000 per tire; the minimum so far has been 18,000 and the maximum almost 50,000 miles. The weight of the complete outfit (no load) is about 8,400 pounds. Motors are 20 horsepower and have been found ample. The power consumption is about 0.8 of a kilowatt hour per mile. The cost of power is Mex. \$0.0308 per kilowatt hour. The electrical equipment and most of the materials for these seven cars were purchased in England and were erected under General Manager McColl's direction in Shanghai. This railless trolley system is the most successful installation of the kind that the writer ever investigated.

The management of this system is entirely British, and, while a good many of the requirements are purchased in Shanghai, preference is undoubtedly given to materials from British sources.

Hongkong Tramways

Head Office: Russell Street, Hongkong. Cable Address: Snakefish. All the following officials are located in Hongkong:

Chairman	...	Hon. C. E. Anton.
General manager and chief engineer	...	J. J. S. Kennedy.
Assistant chief engineer	...	R. J. Wilton.
Secretary	...	W. E. Roberts.
Traffic superintendent	...	A. Course.
Workshop superintendent	...	A. K. Henderson.
Power engineer	...	A. D. Macdonald.

The Hongkong Tramways Co. (Ltd.) operates a system of well maintained and managed tramways extending from one end of the city of Victoria to the other, either on or near the water front. The city is stretched out for several miles on the island of Hongkong between the high ground and the harbor.

For the year 1917 the profits from operations, after liberal depreciation charge had been deducted, amounted to \$248,915 (gold). Debenture interest totaled only \$33,575, and \$33,585 was paid as an interim 9 per cent. dividend, leaving the handsome

amount of \$179,755. This was added to the previous surplus balance and made the total accumulated surplus balance \$261,050, from which it was proposed to pay an additional 3 per cent. dividend, making a total of 12 per cent. on the share stock.

Peak Tramways

Head Office: Alexander Building, Hongkong. Cable Address: Fencibles. The officials are located in Hongkong:

General managers	...	John D. Humphreys & Son.
Superintending engineer	...	C. B. Buyers.

The Peak Tramways at Hongkong are what would be called, around Pittsburgh, an "incline." The service rendered is the conveying of passengers by cable incline lift from a station near the foot of the slopes to a point a considerable distance up on the higher ground, the highest point of which is known as the Peak. The Peak is about 2,600 feet above sea level, and in this district there are many residences and a large hotel.

Tramways in Japan

With 136 concerns, 1,255 miles of line in operation, and 289 miles under construction on March 31, 1916, it will be seen that there is at present an average of less than 11.4 miles of line for each tramway. This is sufficient to indicate that a great deal could be said about the tramway situation in Japan.

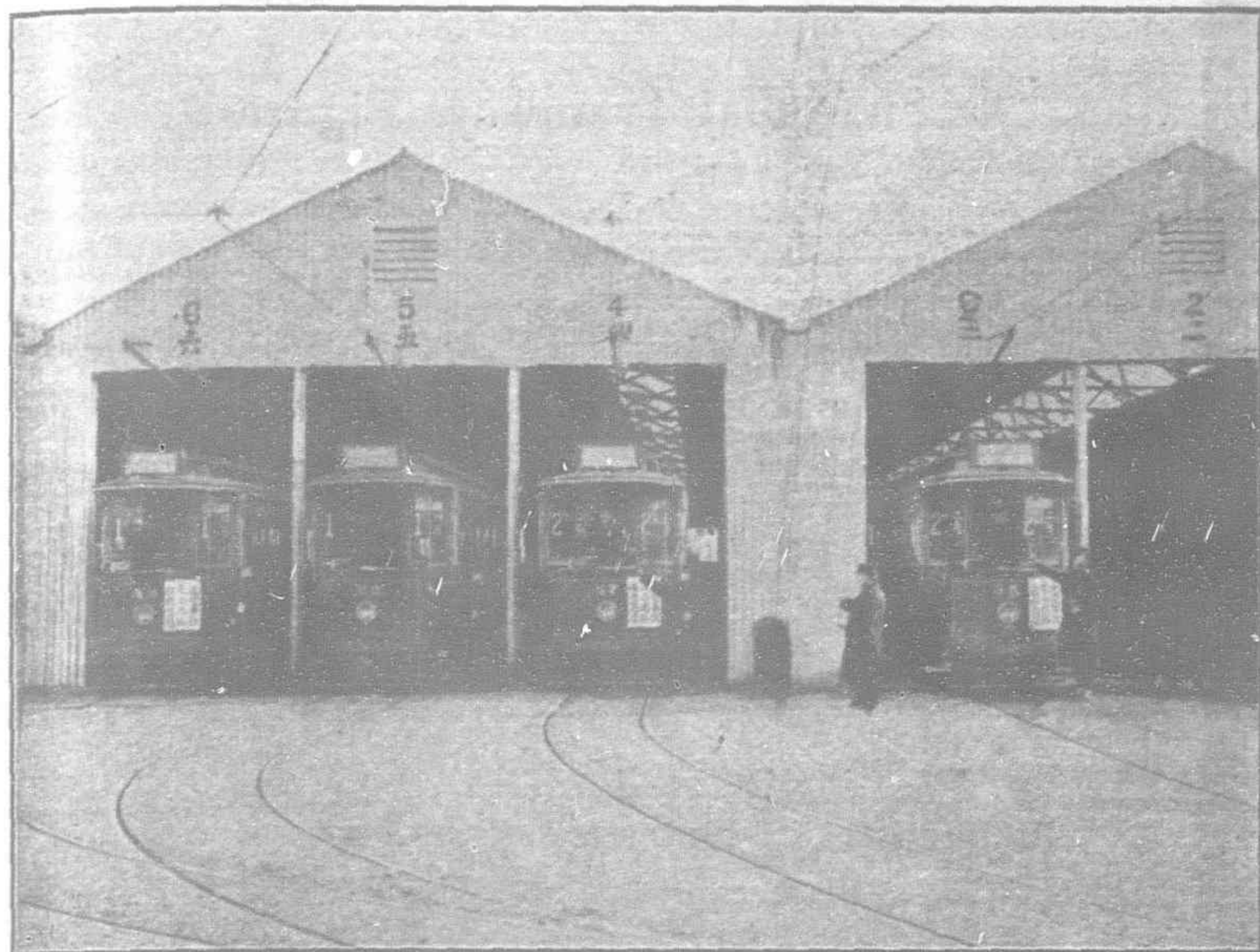
Extent of Lines

The following table shows the performance statistics of all classes of Japanese tramways for the year ended March 31, 1916:

Items	Kind of Tramway				
	Electric	Steam	Gas motor	Horse	Man power
Number of companies	64	22	4	34	14
Miles of line open	667.66	211.65	60.56	244.18	70.40
Miles of line under construction	232.62	38.34	2.07	12.36	3.23
Construction cost per mile of line of transportation property	\$163,060	\$11,793	\$15,680	\$4,328	\$6,007
Total construction cost of transportation property	\$108,868,838	\$2,495,937	\$949,538	\$1,056,749	\$317,158
Total construction cost of property of outside undertakings	\$29,224,195	\$163,891	\$58,610	\$31,515	\$105,719
Total construction cost of all property	\$138,093,033	\$2,650,828	\$1,003,148	\$1,056,749	\$422,877
Total outstanding capital liabilities	\$155,305,675	\$3,553,200	—	\$1,404,738	\$576,880
Total outstanding capital liabilities per mile of line	\$232,612	\$12,650	—	\$5,785	\$8,197
Total working revenue	\$19,275,165	\$382,793	\$148,507	\$290,074	\$171,623
Total working expenses and interest charges	\$12,650,832	\$249,406	\$104,812	\$254,405	\$149,028
Net income (no dividends deducted)	\$6,624,333	\$133,387	\$43,695	\$35,669	\$22,595
Daily working revenue per mile of open line	\$56.23	\$5.29	\$6.40	\$3.08	\$3.69
Daily working expenses per mile of open line	\$26.30	\$3.30	\$3.98	\$2.55	\$2.86
Daily operating income per mile of open line	\$29.93	\$1.99	\$2.42	\$0.53	\$0.83
Operating ratio... per cent.	46.8	62.4	62.1	83.0	77.4
Working revenue per vehicle-mile	\$0.116	\$0.114	\$0.082	—	—
Working expenses per vehicle-mile	\$0.054	\$0.071	\$0.051	—	—
Operating income per vehicle-mile	\$0.062	\$0.043	\$0.031	—	—
Number of passengers carried	624,890,286	6,428,420	2,822,032	4,064,980	277,440
Passenger earnings	\$12,404,157	\$302,045	\$112,298	\$189,017	\$12,991
Earnings per passenger carried	\$0.0198	\$0.0470	\$0.0398	\$0.0465	\$0.0475
Number of tons (2 000 pounds) of goods hauled	524,337	303,577	89,124	149,283	401,597
Goods earnings	\$166,961	\$68,327	\$26,502	\$63,788	\$74,115
Earnings per ton of goods hauled	\$0.318	\$0.223	\$0.294	\$0.393	\$0.183
Number of locomotives	5	147	79	—	—
Number of carriages	3,849	182	88	437	128
Number of goods wagons	251	301	132	577	518

The 668 miles of electric tramways are the most important and will be principally referred to in this text. The largest tramway centre at present is the Osaka district, where there are now more than 250 miles of line connecting Osaka with Kyoto.

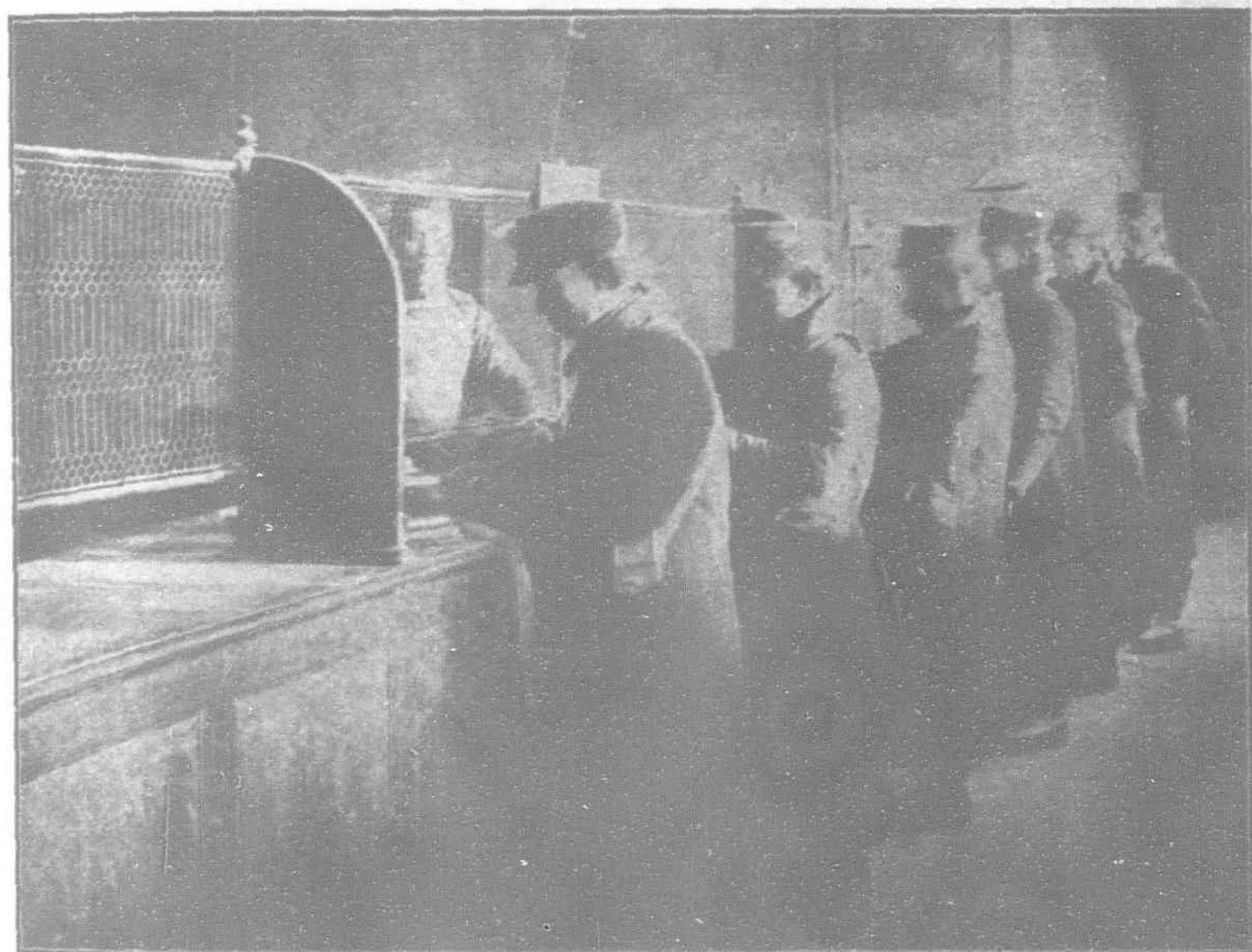
Shanghai Foreign Settlement Tramways



Bubbling Well Car Sheds



Inside Training of Motormen



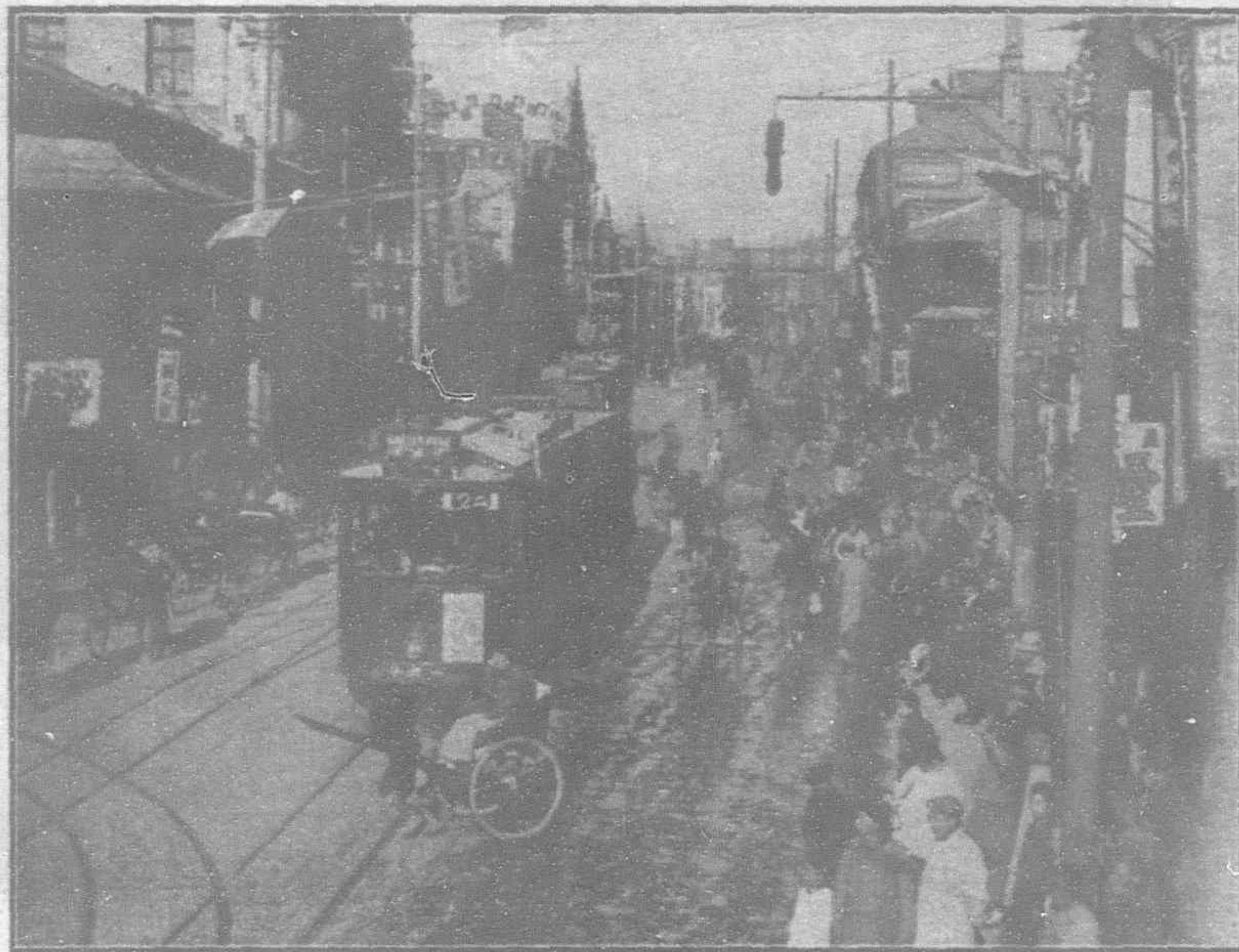
Conductors Paying in at Cash Office



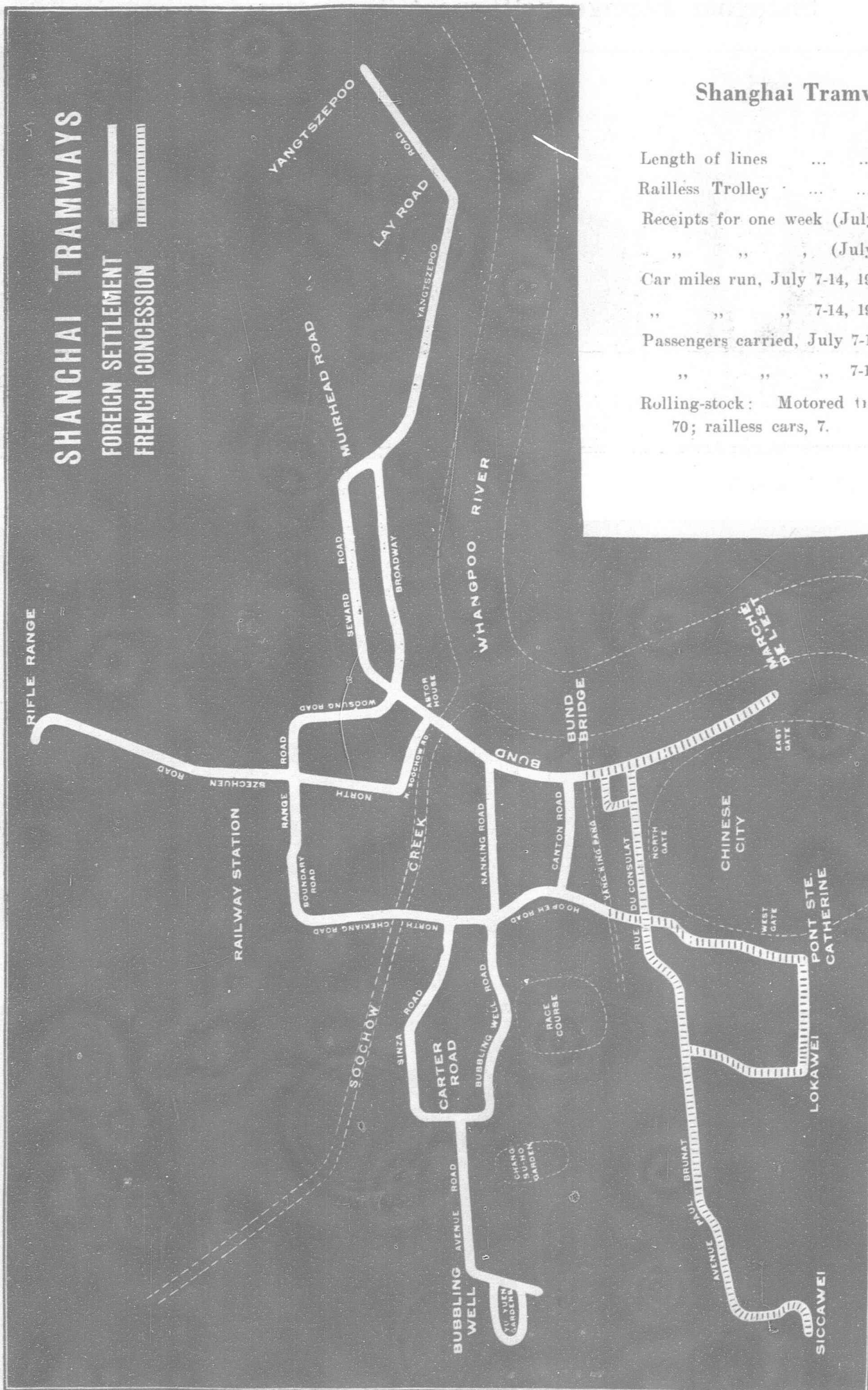
Bubbling Well Work-shops, the Smithy



Training Conductors



Nanking Road



Shanghai Tramways Figures

Length of lines	...	...	...	16.45 miles
Railless Trolley	...	...	...	0.75 mile
Receipts for one week (July 14, 1920)...				\$49,721.66
" " " (July 14, 1919)...				39,959.81
Car miles run, July 7-14, 1920	...			94,608 miles
" " " 7-14, 1919	...			88,948 miles
Passengers carried, July 7-14, 1920	...			2,223,412
" " " 7-14, 1919	...			1,817,599
Rolling-stock: Motored trolley cars, 90; trailers, 70; railless cars, 7.				

Shanghai Railless Traction

Railless Electric Traction was introduced by the Tramway Company on the concrete Fokien Road in July 1915, and the system has been working continuously and smoothly ever since. This form of traction seems to have proved a success, it is safe and free from noise and I think it is popular. The Company finds, however, that the route which is less than three-quarters of a mile in length, is rather short to offer an adequate test of commercial results, and in order to enable the Company to obtain this test, the Council will probably sanction the Company's application for a short extension eastwards from Fokien Road along Peking Road to Honan Road and northwards along Honan Road to the Soochow Creek—this additional portion being about one-third of a mile in length.

Kobe, Nara, and other parts of this the most important industrial district of Japan. Next in importance is the Tokyo district, with 81 miles of line and 46.5 miles under construction in the city of Tokyo, all under municipal management—in addition to a number of other private tramways, including one to Yokohama. Considering the importance of the Moji industrial district, it has at present a very limited tramway service, there being only one line of about 20 miles, from Moji to Orio. The entire length of this line parallels the water front, which is a continuous line of industrial plants, one of them being the Japanese Imperial Steel Works. In addition to the Tokyo system, the Osaka city system of 35 miles, the Kyoto city lines of 15 miles, and the Kobe city lines of 15 miles are all now municipally owned and operated. All the other lines are privately owned and operated. The Keihan Co., with 33.7 miles in the Osaka district, has the greatest mileage of any of the private companies.

The longest steam tramway line is 29.7 miles, the longest gas-motor line is 32.2 miles, the longest horse line is 15.8 miles, and the longest man-power line is 18.25 miles.

On March 31, 1916, there was under construction 232.62 miles of line of all classes, but there was projected at that time a very considerable additional mileage, much of which will probably be built in the next few years. It seems entirely safe to predict that the present mileage of electric lines will be very considerably increased in the near future.

Roadway and Track

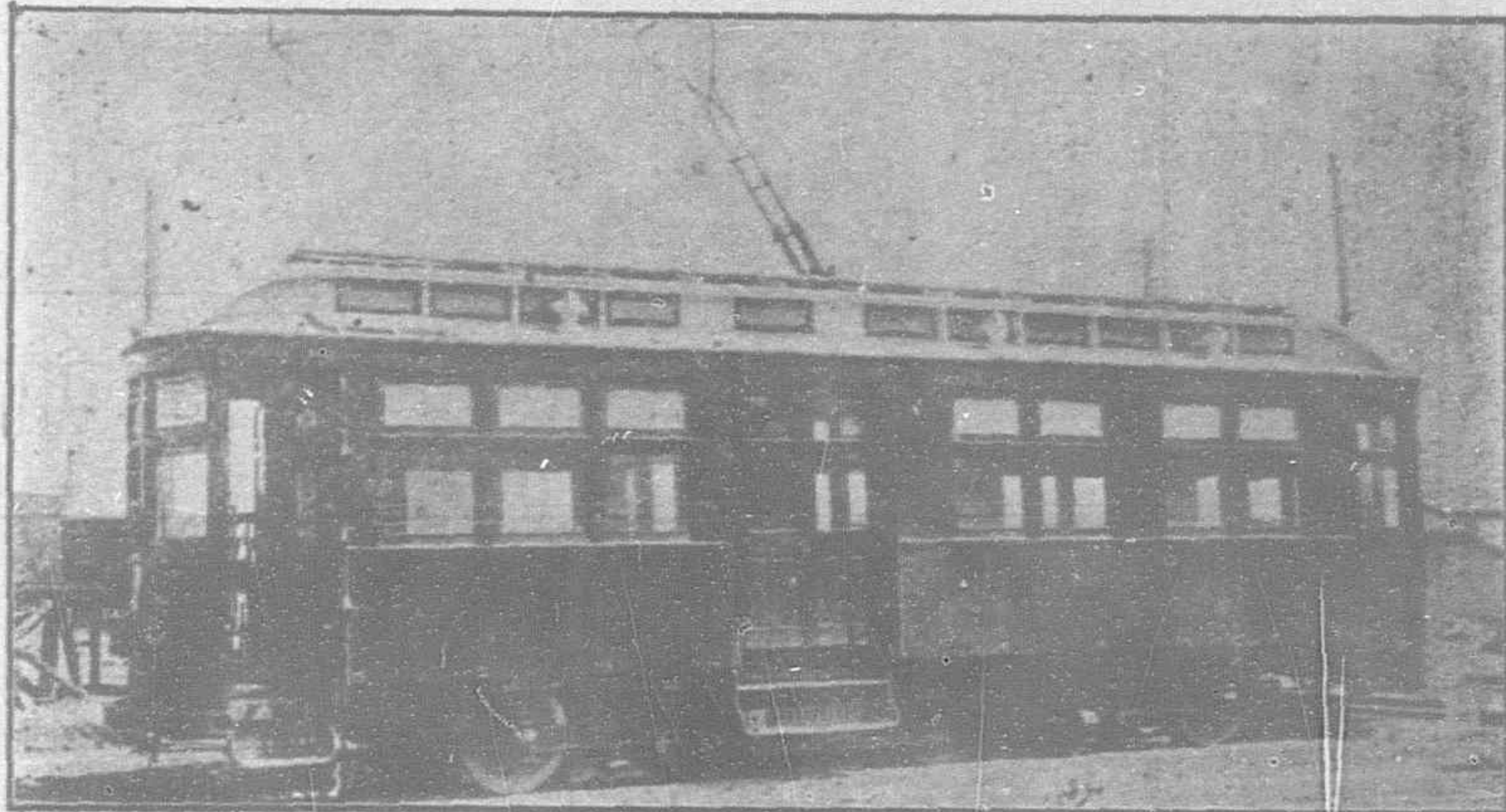
Tramway location is usually rather difficult in Japan, as applying to both city and interurban lines, on account of the limitations in securing adequate right of way or sufficient room on streets and roads, many of which are crooked and narrow. Most of the older interurban lines were indifferently located and constructed, but some of the more recent ones have been well located and substantially constructed, as illustrated by the line between Osaka and Nara, which is a high-speed line with first-class construction in every respect. On this line there are three well-built double-track tunnels, one of which is about 2.1 miles in length.

The track work on all the lines is very similar to the ordinary American practice, and a considerable amount of the special work is of American manufacture. A great variety of gauge has been used, but a majority of the lines are 4-ft. 8½-in. The rail, as one might expect, is of very great variety of weight and section. The overhead construction is mostly along American lines, with the ordinary single trolley. In a few instances pantagraph contacts are used.

Rolling Stock

As would naturally be expected, there is a great variety of rolling stock on the different lines, but many of the trucks and car frames, as well as a considerable number of the car bodies,

have been furnished in the past by American manufacturers. There are several concerns in Japan that have been paying close attention to the furnishing of tramway rolling stock in recent years, one of the most important being the Tokyo Works of the Kisha Seizo Kaisha.



Electric Tram in Dairen

There is a very great variety of electrical equipment, but a majority of the motors and control are of American manufacture, furnished mostly by the companies that have connections with Japanese commercial and engineering contracting concerns. A very noticeable amount, however, of other electrical equipment has been used, particularly German, English, and Swedish, in the order named.

Power Plants and Substations

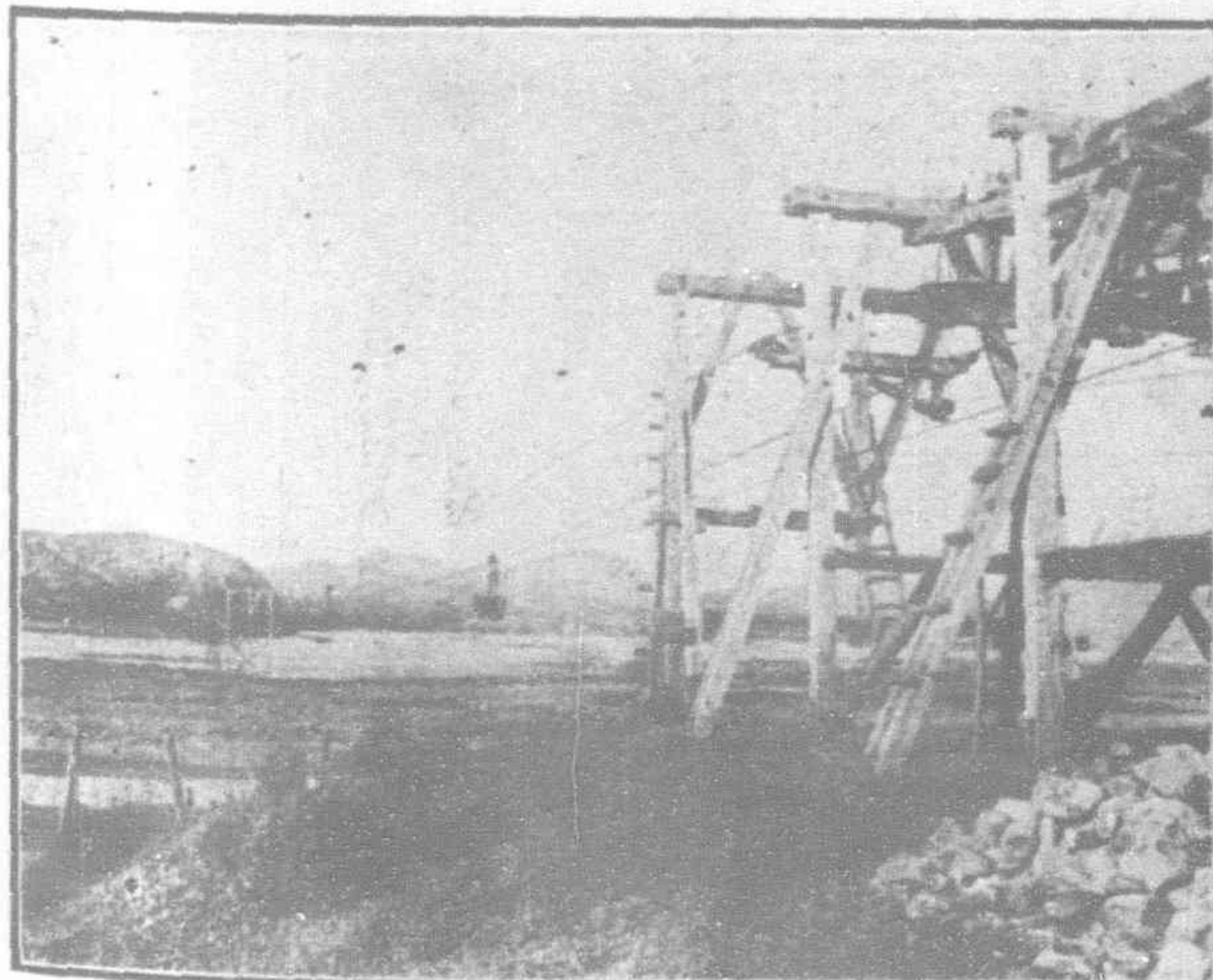
Practically the same remarks can be made about the powerhouse and converter equipment as about the electric car equipment. At present most of the power is furnished by steam plants, but there appears to be a decided tendency in such situations as the Osaka district to connect up to central power plants, and there is also a strong tendency to utilize hydroelectric sources where such are available.

Officials—Purchases

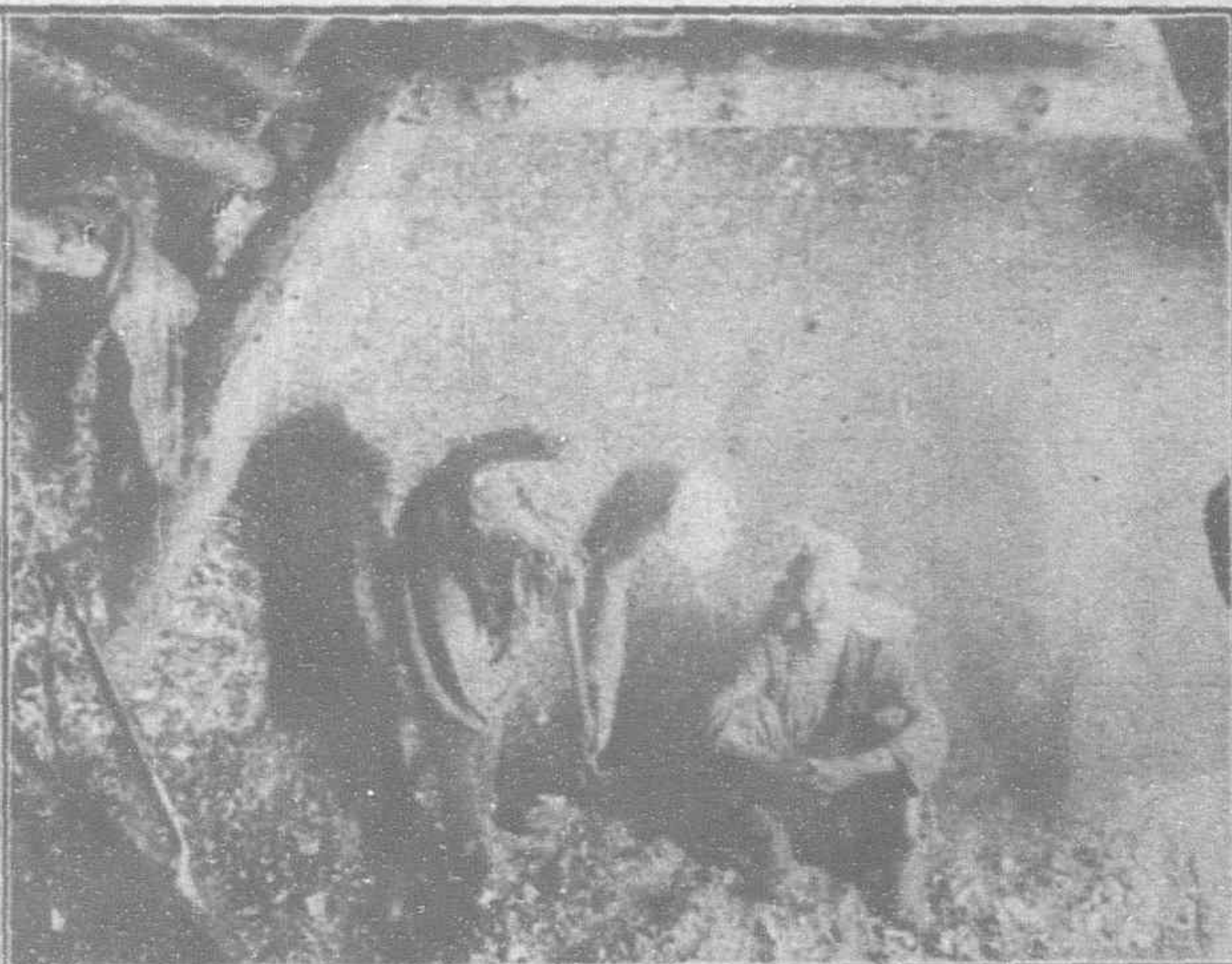
The writer spent considerable time in determining what could be done in the way of the preparation of a directory, and although this was found to be practicable for some of the more important lines, the results as a whole were such that it was decided not to attempt to include the usual directory for any of the tramways. The municipal tramways in each case are under the general direction of the mayor.

The large systems, particularly at Tokyo, Osaka, Kyoto, and Kobe (all municipally operated), and the Keihan, Nagoya, and other similar privately owned lines, have organized purchasing branches, and while many of the requirements have been and will continue to be supplied from American sources, this business is

closely controlled by the concerns now handling it. Large electrical companies are not only represented in all cases by strong Japanese commercial companies, but as a rule they have their own representative in Japan co-operating with these Japanese concerns. Further, some of the most prominent American electrical companies have established well-equipped factories in Japan, which are not only handling the Japanese business but in some instances are sending their products to China, Manchuria, and Korea.



Aerial Tramway at Korean Coal Mines



Korean Miners

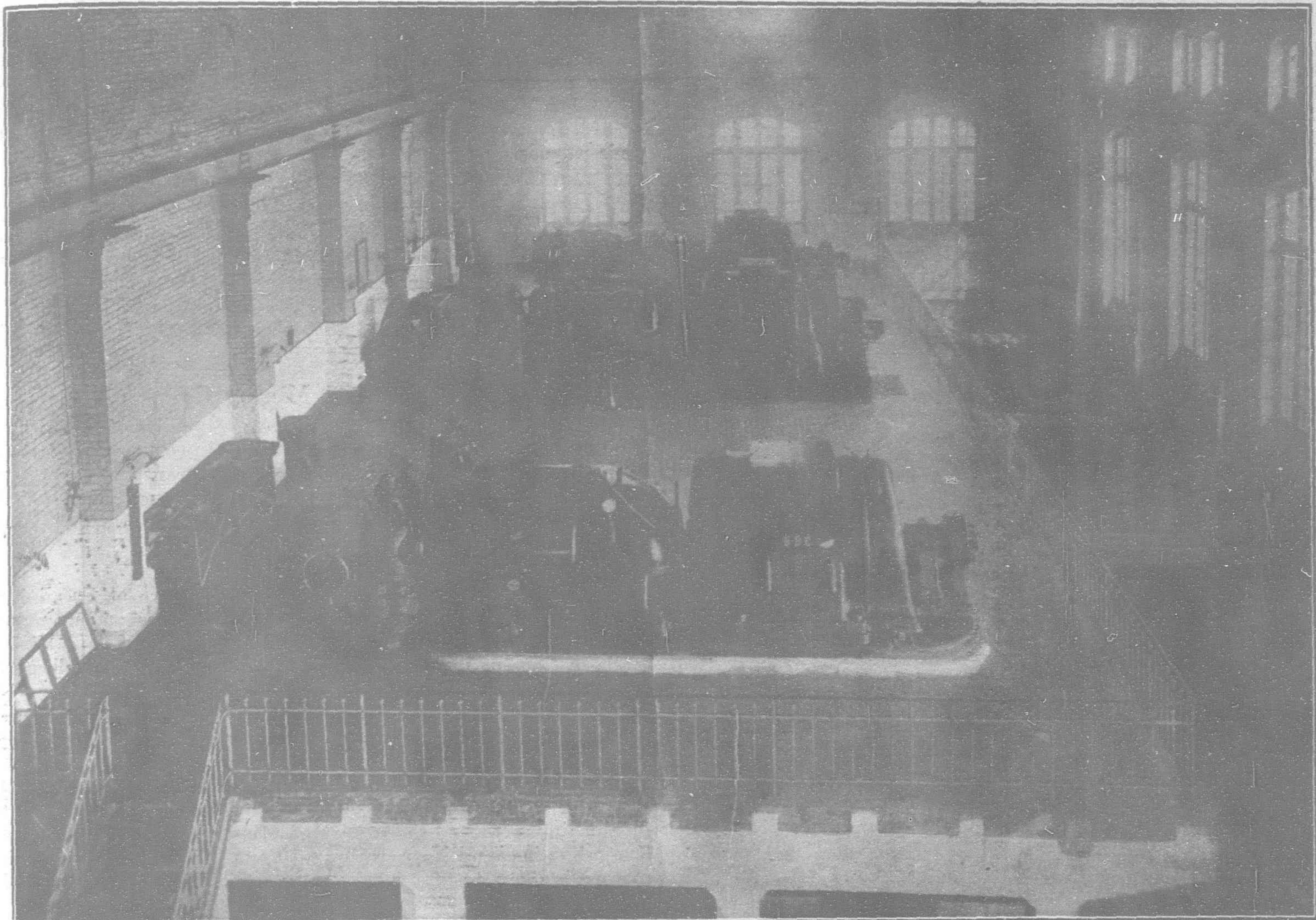
CAPITAL, EARNINGS, EXPENSES, ETC., OF JAPANESE MUNICIPAL AND PRIVATE ELECTRIC TRAMWAYS. (1917)

Names of Municipalities and Companies.	Authorised Capital	Paid-up Capital.	Reserve Fund.	Lines open to Traffic.		Rolling Stock.	No. of Passengers carried.	Receipts.		Expenditure.		Net Earnings.	Amount brought over from the Preceding Year.	Distribution.				Amount carried to Next Year.
				Mileage of Lines.	Length of Railways.			Earnings.	Miscellaneous Receipts.	Ex-penses.	Miscellaneous Expenses.			Reserve.	Bonuses.	Amount of Dividends.	Rate of Dividends	
	Yen	Yen	Yen	M. C.	M. C.			Yen	Yen	Yen	Yen	Yen	Yen	Yen	Yen	Yen	%	Yen
+ Aichi Electric Railway Co. ...	1,850,000	1,250,000	94,050	24.30	27.18	18	1,206,739	342,444	6,347	156,966	46,049	145,777	3,812	49,050	4,100	93,125	7.5	3,314
+ Hanshin (Osaka-Kobe) Electric Railway Co. ...	10,500,000	7,875,000	1,083,498	22.10	44.19	89	24,891,592	2,789,736	140,260	1,498,262	351,523	1,080,211	241,818	119,500	54,500	1,080,625	14.0	67,404
+ Hanshin Express Electric Railway Co. ...	5,500,000	3,850,000	271,977	18.04	36.09	44	7,973,694	1,129,313	131,738	473,432	346,830	440,789	145,056	222,500	39,000	308,000	8.0	16,345
+ Ina Electric Tramway Co. ...	3,000,000	1,875,000	83,281	20.79	21.66	52	723,898	402,432	10,536	234,403	—	178,565	34,657	18,951	11,500	143,437	9.0	39,334
+ Keihan (Kyoto-Osaka) Electric Railway Co. ...	10,500,000	10,500,000	313,558	34.62	69.44	58	18,678,621	2,049,064	149,013	1,132,920	222,126	843,031	72,781	54,000	36,000	785,400	7.5	40,412
+ Keihin (Tokyo-Yokohama) Electric Railway Co. ...	5,100,000	4,590,000	295,369	17.25	34.49	72	13,224,839	1,044,227	29,502	505,328	203,598	364,803	25,731	36,600	18,300	275,400	6.0	60,234
+ Kiushiu Electric Tramway Co. ...	6,300,000	6,300,000	360,000	21.59	43.38	40	9,120,326	2,023,540	440,831	748,209	778,997	937,165	107,126	138,000	46,500	693,000	11.0	166,792
+ Kiushiu Water Power Electric Co. ...	17,250,000	11,212,500	283,216	26.09	32.01	166	5,869,217	2,708,506	119,189	1,534,949	84,807	1,207,939	160,150	60,398	60,397	991,875	10.0	255,419
Kyoto Electric Railway Co.	4,500,000	4,500,000	86,626	15.48	30.32	133	20,625,300	725,907	27,001	474,979	—	277,929	19,565	14,000	13,600	247,500	5.5	22,394
Kyoto Municipal Electric Tramway ...	10,377,342	10,377,342	—	14.28	28.56	167	31,441,175	1,099,401	18,363	501,525	—	616,240	331,973	—	—	* 582,671	5.7	365,542
+ Kyoto Electric Light Co. ...	15,000,000	9,000,000	1,351,796	22.56	22.72	29	545,867	2,739,390	46,340	1,391,351	127,000	1,267,379	108,608	312,571	50,000	890,000	11.1	123,416
+ Keisei Electric Tramway Co.	1,500,000	1,500,000	55,500	13.51	20.40	10	2,738,590	363,752	5,097	250,486	14,517	103,846	84,714	17,000	5,800	90,000	6.0	75,760
Mino Electric Tramway Co.	1,500,000	1,125,000	43,000	21.74	25.32	39	4,423,960	262,326	4,185	136,582	41,674	88,255	4,078	20,000	2,000	65,104	5.8	5,229
Nagoya Electric Railway Co.	7,500,000	5,653,493	229,655	54.28	96.23	311	38,816,113	1,492,526	41,866	750,043	140,193	644,156	22,135	52,000	27,500	562,500	10.0	24,291
+ Osaka Electric Tramway Co.	4,500,000	4,500,000	64,000	19.11	38.23	22	6,675,376	1,112,975	5,296	665,432	—	452,839	65,771	40,400	27,800	327,500	7.3	122,910
+ Osaka Municipal Electric Tramway ...	35,921,596	35,921,596	1,060,064	34.45	69.10	550	179,830,140	6,073,477	178,072	1,860,920	20,937	4,369,692	892,832	435,000	—	* 4,019,268	11.1	808,256
+ Onsen Electric Tramway Co.	1,000,000	649,565	21,330	18.16	19.62	20	784,782	78,233	14,809	52,558	8,759	31,725	7,584	5,650	1,000	26,700	5.0	5,959
+ Takasaki Water Power Electric Co. ...	2,300,000	1,775,000	201,664	20.46	21.20	34	366,101	546,352	7,361	250,929	—	302,784	27,836	74,091	14,000	193,099	13.0	49,430
+ Tokyo Municipal Electric Tramway ...	97,291,293	97,291,293	3,001,477	82.59	165.05	1,435	296,211,645	15,107,473	530,580	5,615,219	281,609	9,741,225	—	1,661,720	450,000	* 5,921,160	5.0	1,708,345
+ Tosa Electric Railway Co. ...	1,500,000	1,500,000	408,745	15.61	25.48	57	6,145,034	501,741	8,891	223,052	54,047	233,533	22,703	49,300	18,681	152,500	10.2	35,755
Other 56 Companies ...	136,429,243	107,333,150	5,272,115	456.32	593.41	1,892	169,989,177	23,555,805	1,268,984	12,840,678	740,356	11,343,736	996,938	1,536,980	474,763	7,239,851	...	2,027,510
Total ...	379,319,474	328,583,939	14,580,921	975.33	1,465.68	5,238	840,282,186	66,148,620	3,184,262	31,298,223	3,463,022	34,671,619	3,375,868	4,917,711	1,355,441	* 10,523,099 14,165,616	...	6,024,051

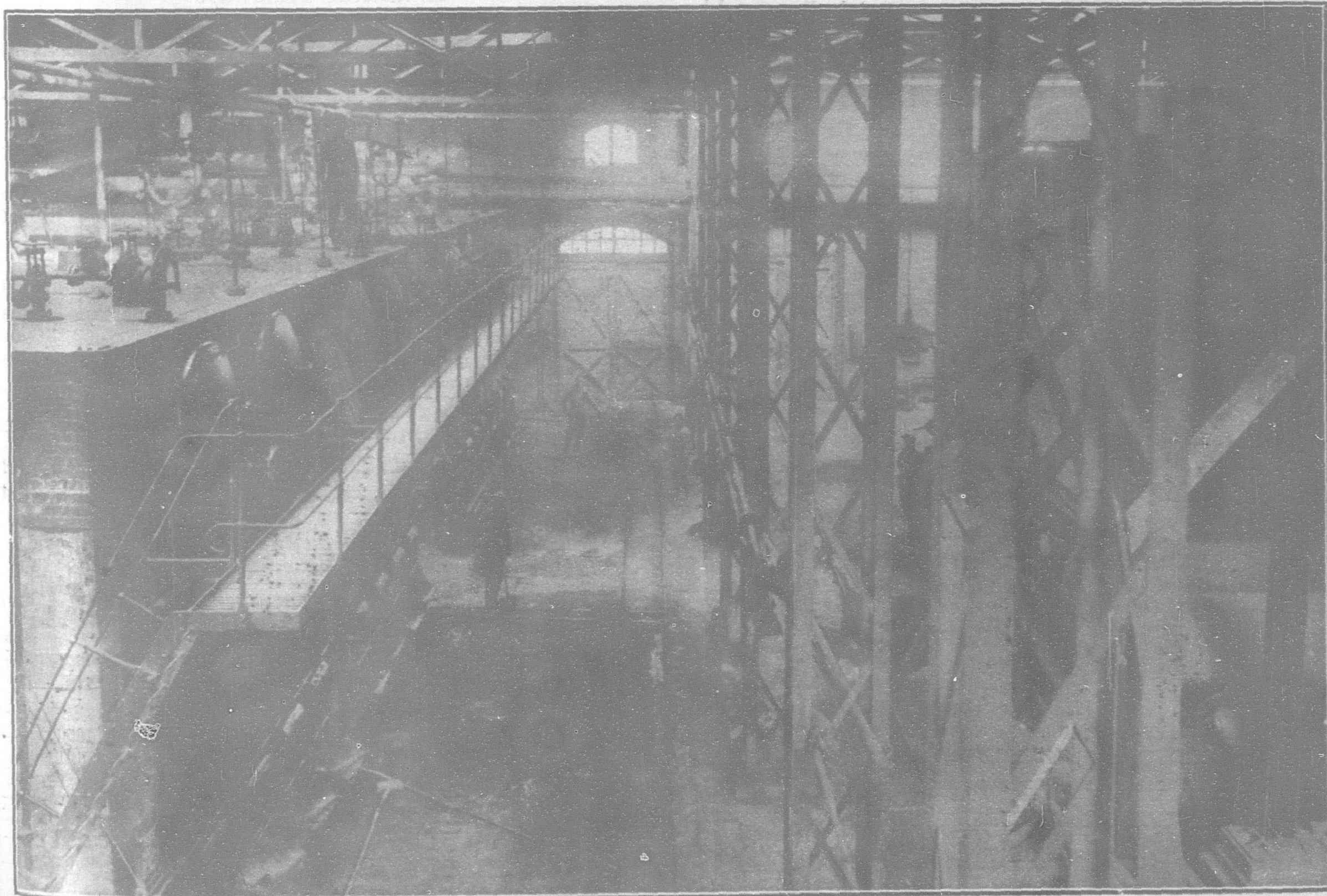
NOTE.—† Represents the figures for the companies which are engaged in the business of supplying electric lights or electric power in addition to their principal business.

Yen—28. Od. 582

Tientsin Tramways



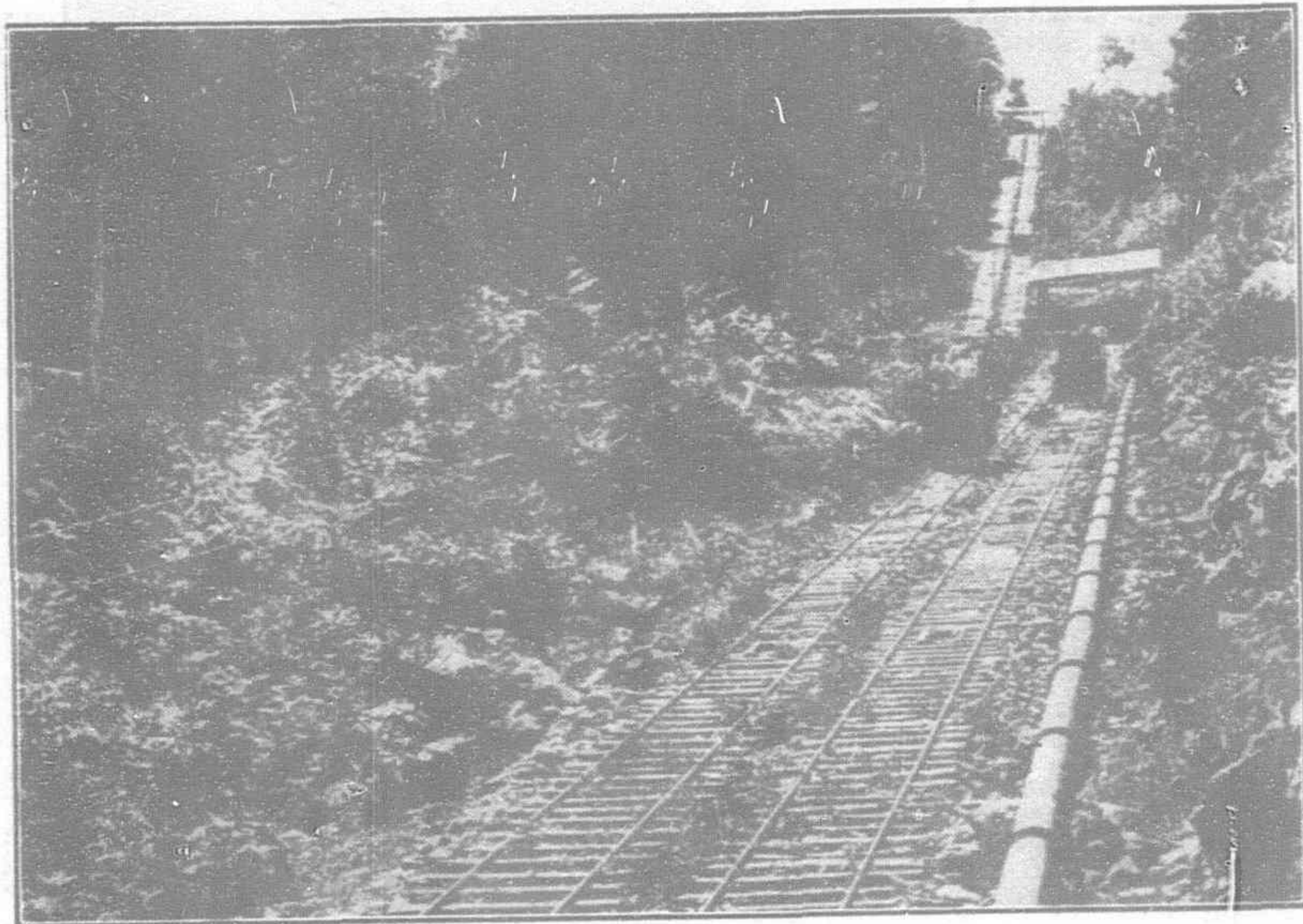
Tientsin Tramways Power House.



Tientsin Tramways Boiler Room.

Korean Light Railways and Tramways

On March 31, 1916, there were 64.9 miles of general-traffic lines of all classes and 46.9 miles of industrial lines, making a total of 111.8 miles. On this same date there were under construction 144.4 miles of the former and 21 miles of the latter, a total of 165.4 miles. In addition, there is projected a very considerable mileage of both classes which will be built in the course of time.



Tramway at Totok, Menado, Celebes

There has been a great deal of difficulty in obtaining the necessary materials for constructing these lines and the rolling stock to operate them, especially since the exhaustion of the supply of 2-ft. 6-in. gauge equipment from the Antung branch of the South Manchuria Railway, and it is very probable that the construction of the new lines will be materially retarded until prices become more nearly normal.

Keijyo (Seoul) Electric Co.

The Keijyo Electric Co. is the most important concern of its kind in Chosen; its operations include the supplying of commercial electricity and gas for the city and suburbs of Seoul (called Keijyo by the Japanese). The company was originally owned by American interests, but some years ago was purchased and taken over by Japanese capital. After the company was taken over it was first known as the Nikkan Gas and Electric Co., but the name was recently changed to that just given. The present paid-up capital is \$2,542,350, with other capital obligations amounting to approximately \$1,000,000.

There are 16.6 miles of route, with 28.6 miles of all track, all of which is of 3-ft. 6-in. gauge. Details of the earnings were not available, but sufficient data were obtained to indicate that while the gas and electric operations may be profitable the tramways are not carrying their part of the interest and dividend charges.

There is one power house for the general supply of current, with one substation in addition for the conversions of tramway power. The rolling stock consists of 79 motored passenger cars, 6 motored and 6 trailer goods cars, and 2 sprinklers. This rolling stock, including trucks and electric equipment, is largely of American manufacture. When the writer visited Seoul in July, 1917, there were 6 new cars under construction in the company's own workshops, the equipment for which had already been received from America. It was desired to build more cars, but these were held up on account of the difficulty in obtaining equipment and the high prices prevailing.

The track is all laid with 60-pound T-rail. A considerable part of the special work is of American manufacture, including some hardened parts.

The head office of this company is at Tokyo, Japan, but Mr. I. Murao (Japanese) is chief engineer, located in Seoul, and has general charge of the tramways, including the handling of purchases that are made locally. Many of these are from the strong Japanese commercial and engineering branches in Seoul, as referred to in connection with the Korean railways.

Zenhoku Light Railway Co.

The Zenhoku Light Railway Co. has 15.5 miles of light railways of 2-ft. 6-in. gauge, connecting with the Konan branch at Riri and extending to Zenshu, where the head office is located. The paid-up capital of this company is \$146,335, with about \$25,000 of other capital obligations. General commercial traffic is handled. The line has a small amount of equipment, consisting of 2 locomotives, 6 passenger cars, and 12 covered and 9 open goods wagons.

Korean Gas and Electric Co.

The Korean Gas Co. now has 12.8 miles of electric tramway, of 2-ft. 6-in. gauge, at Fusan, including a line to the Torai Hot Springs. This same company operates the commercial electric and gas business at Fusan. The company now has \$675,000 in capital shares outstanding, with about \$200,000 of other capital obligations.

Kanko Coal Mining Co.

The Kanko Coal Mining Co. operates 8.8 miles of steam line, of 2-ft. 6-in. gauge, handling general commercial traffic, though the principal use of the line is the transporting of this company's coal to the port of Seikoshin. The issued share capital is about \$150,000. The head office is at Kanko.

Korean Light Railway Co.

The Korean Light Railway Co., with head office at Fusan, has in course of construction four or five steam lines amounting to about 115 miles of 2-ft. 6-in. gauge. These lines are all in southern Chosen, in the general vicinity of Fusan, and about 25 miles are now practically complete. From the information obtainable it appears that this company has additional mileage projected. It is one of the concerns whose lines will be built under the 6 per cent. subsidy.

This same company has another electrified line of about 12 miles, of 2-ft. 6-in. gauge, under construction from the port in Seishin, in the northern part of Chosen, to Ranan, on the Kyojo-Kwaimei military railway. From all appearances this concern is likely to take a very active part in building subsidized light railways and tramways in all parts of Chosen.

Industrial Tramways

The various mining concerns have, as a rule, built and operated the industrial tramways for the handling of ores and fuel.

The Mitsui Mining Co., of Tokyo, owns and operates the longest line—18.5 miles of steam railway, of 2-ft. 6-in. gauge, between Shinanshu and Kaisen, a short distance north of Pingyang (Heijyo).

Mitsubishi & Co., of Tokyo, have under construction two steam lines, one of 10.3 miles and the other of 3.9 miles, both of 2-ft. 6-in. gauge, and one electric line of 6.8 miles, of 2-ft. 6-in. gauge. These are all for the transportation of ore.

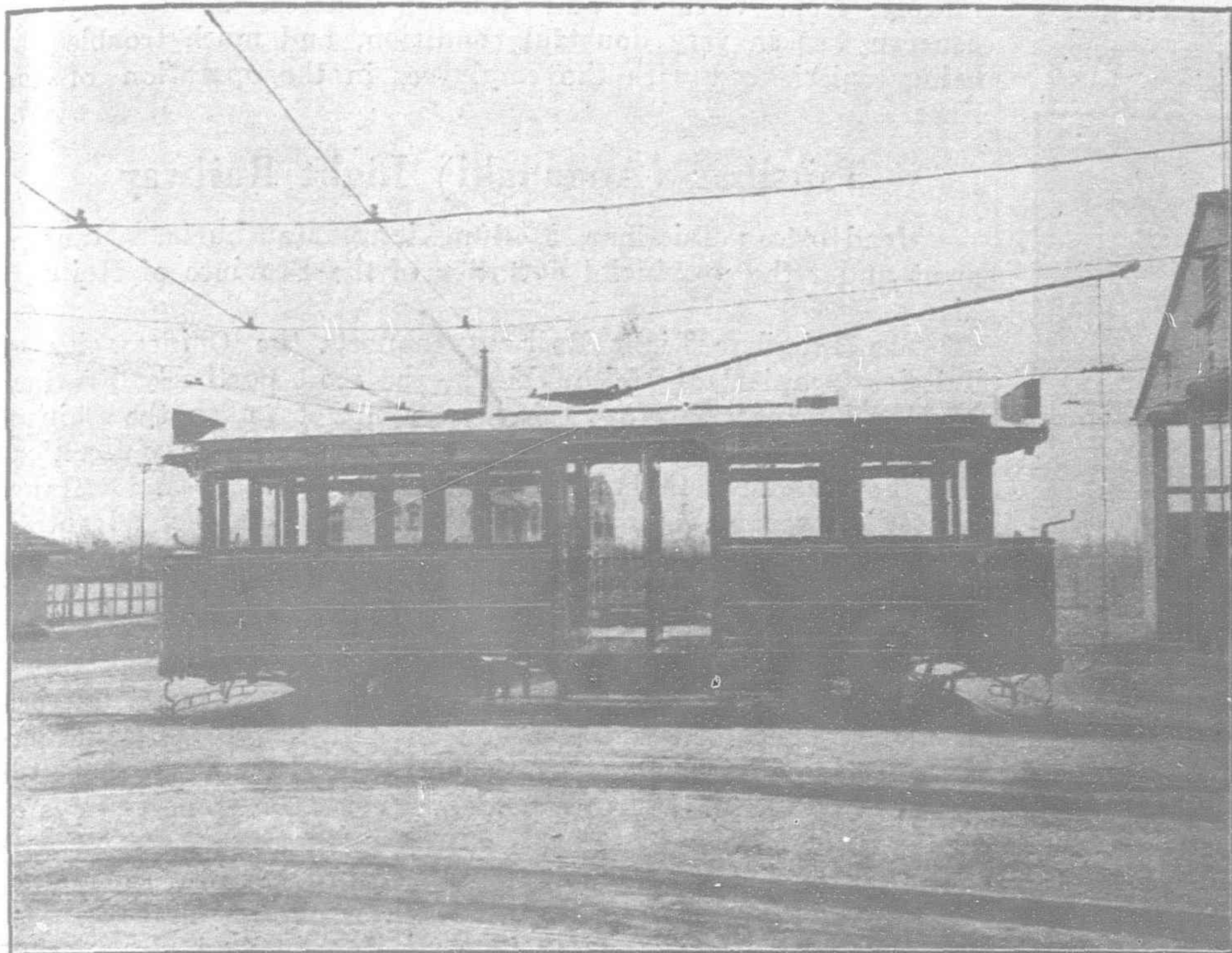
M. Komiya, of Fusan, has 12.2 miles of man-power line, of 2-ft. 6-in. gauge, for the transportation of ore between Kokan and Tokusuri, and there are a number of other small lines. Mining development will probably bring about considerable additions to the number of these small industrial lines.

Dairen and Fushun Tramways

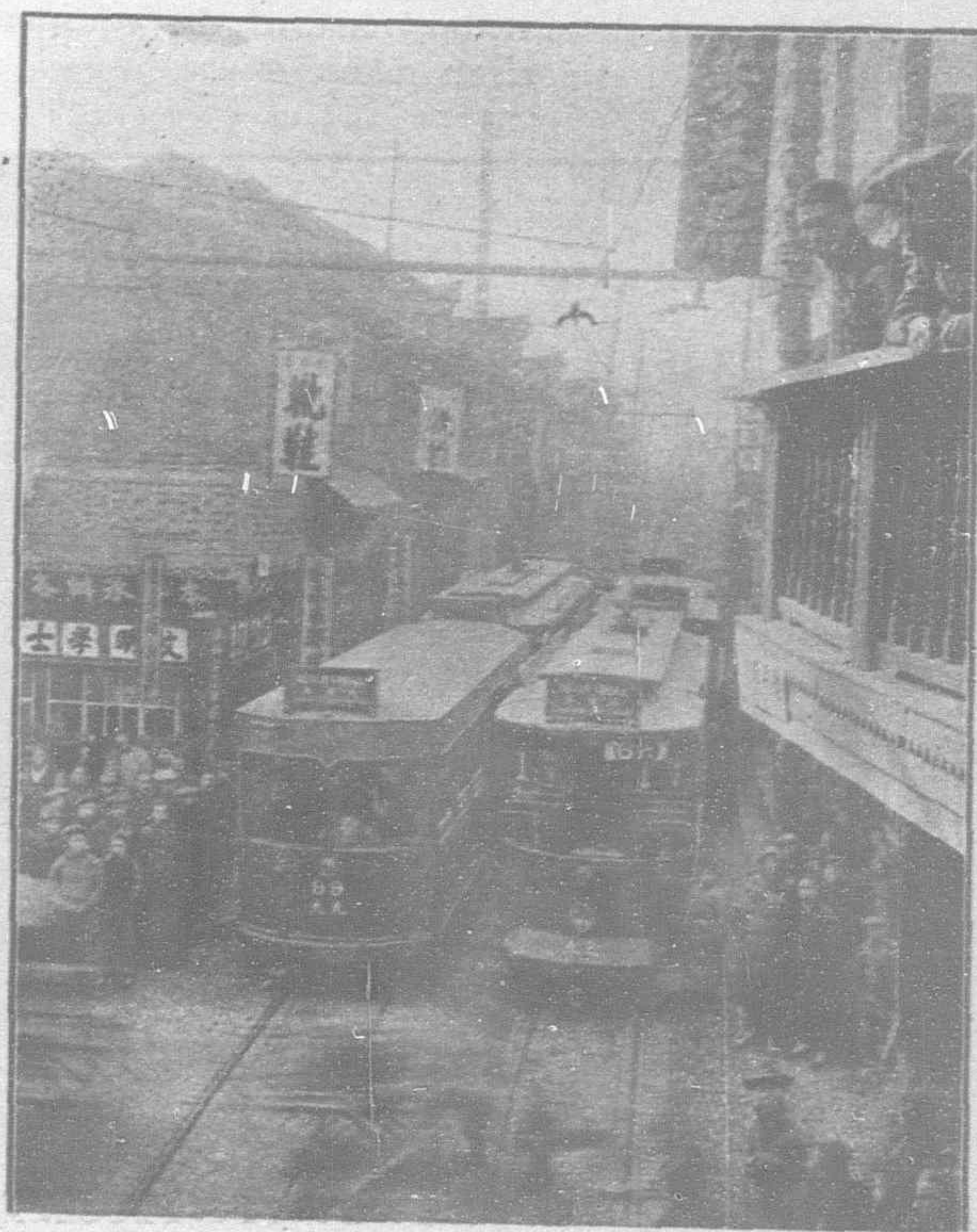
The Dairen and the Fushun tramway systems are owned and operated by the South Manchuria Railway Co. The mileage and equipment are:—

DAIREN TRAMWAYS.				
Miles of line open	...	...	...	25.58
Number of passenger cars	...	...	...	50
Number of motored freight cars	...	...	...	10
FUSHUN TRAMWAYS.				
Miles of line open	...	...	...	48.56
Number of electric locomotives...	...	...	...	11
Number of passenger cars (motored)	...	...	...	3
Number of freight cars (for carrying sand)	...	...	...	185
Number of steam shovels	...	...	...	9

Shanghai's Electric Tramways



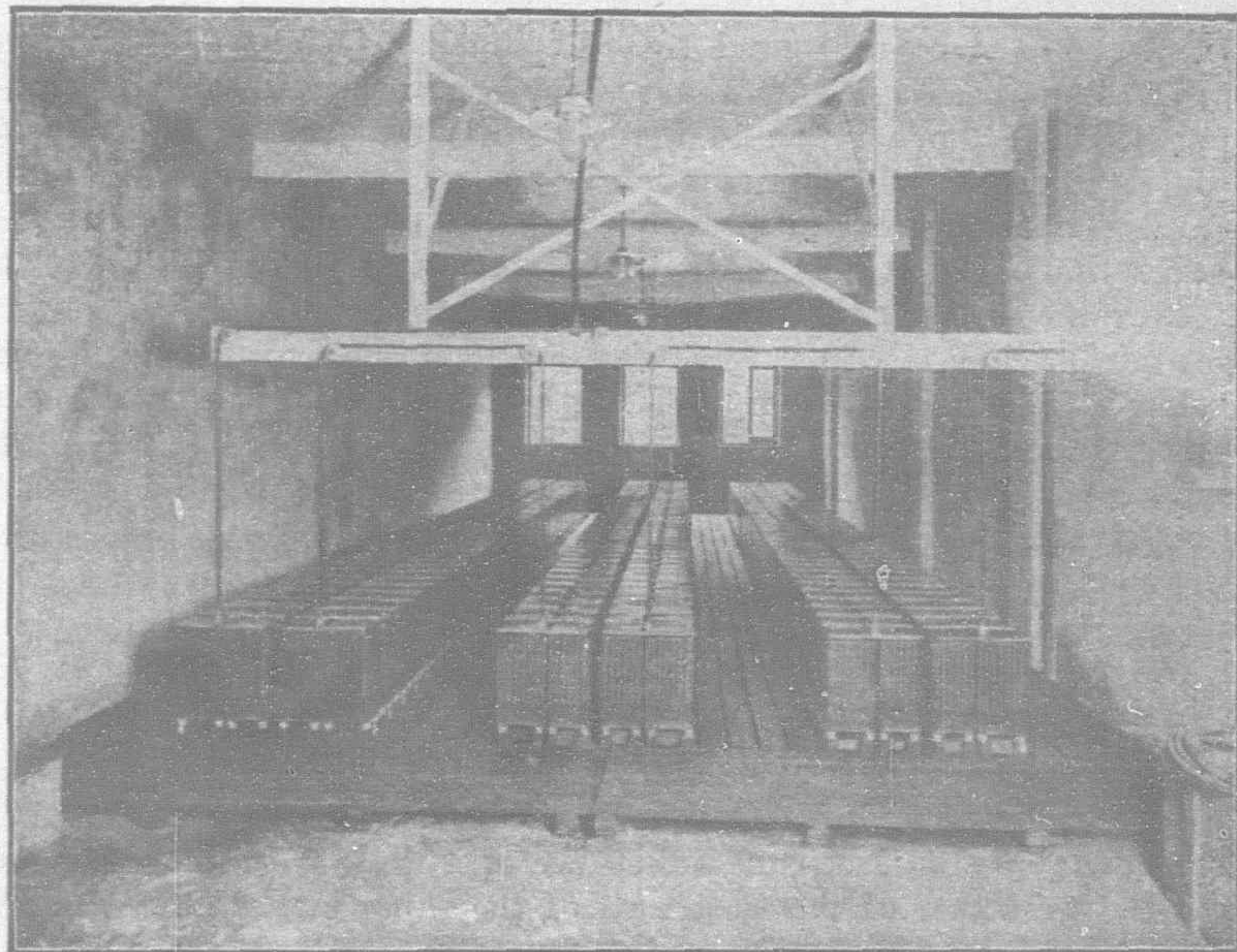
Foreign Settlement Trams—The up-to-date Mid-Entrance Cars now in General Use



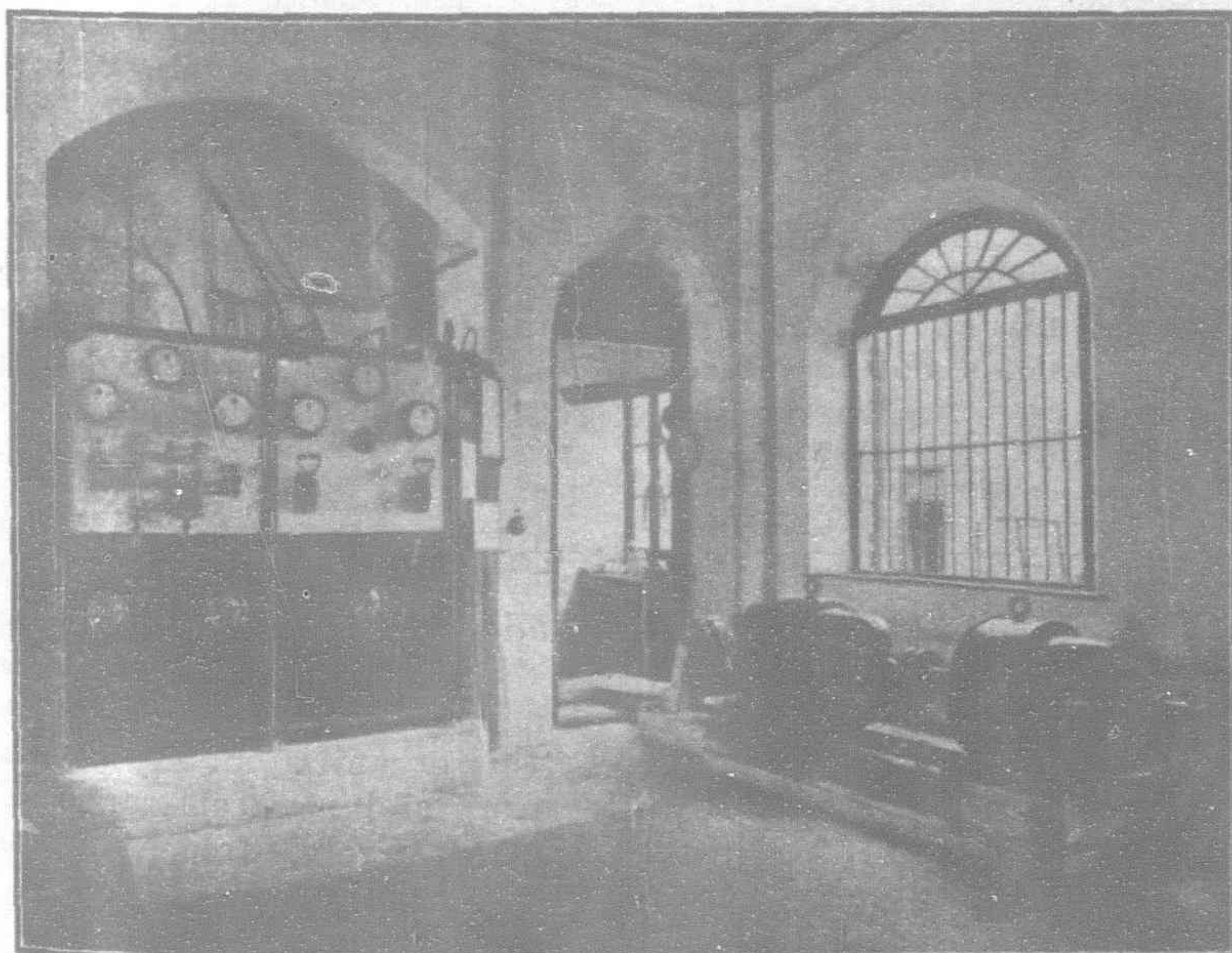
Foreign Settlement Trams—Canton Road



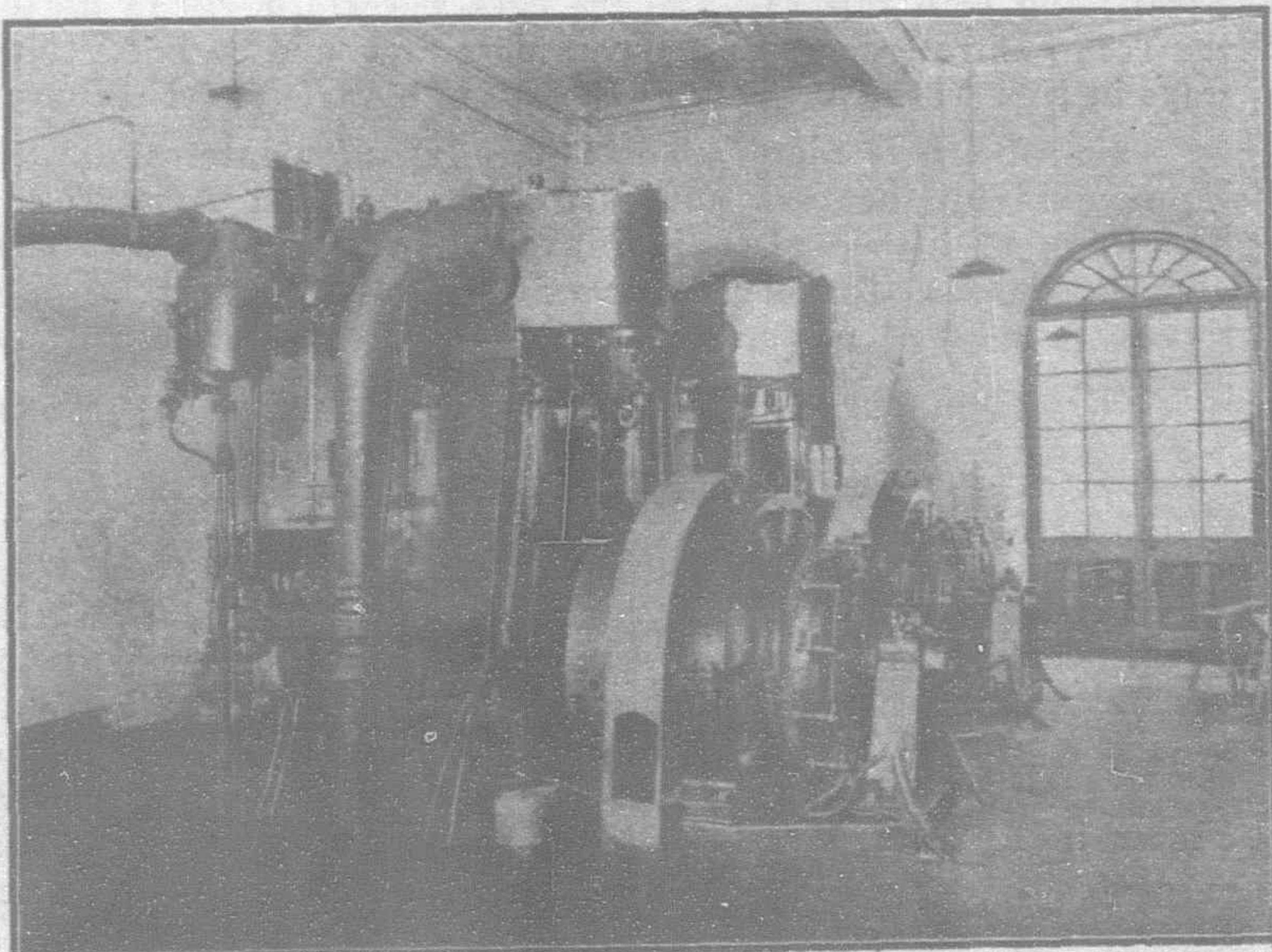
Nantao Tramway—Interior View of Car Shed



Nantao Tramway—Accumulator Battery



Nantao Tramway—Booster and Switchboard



Nantao Tramway—Steam Engines and Dynamos

Both these systems are well constructed, maintained, and operated, and the greater part of the equipment, particularly electrical, is of American manufacture.



Car Equipped for Sprinkling Street in Bangkok

In addition to the passenger service, the Dairen lines have 10 motored freight cars used for distributing freight from and to the steam railways and wharves for the industries in Dairen—particularly soya beans to the oil mills and oil and bean cake from these mills. This service is performed very expeditiously and satisfactorily and prevents a great deal of heavy trucking over the paved streets. All of the Dairen tramway equipment is 600 volts direct current, and a very simple pantagraph contact is used, which, in turn, greatly simplified the overhead construction. There is a very interesting system of fares on the Dairen line, based on time limits. First-class fares are 5 sen (2½ cents gold) for a half-hour ticket and 6 sen (3 cents gold) for a one-hour ticket.

The tramways at Fushun are primarily for the handling of coal, and the passenger service is a secondary consideration.

Mukden Horse Tramways

The Mukden horse tramway starts at the railway station in the railway area and runs a distance of a little more than 4 miles, to the west gate of the west wall of the inner city. This distance is divided into three zones, the fares for the two outside zones being 3 sen (1½ cents gold) and the fare on the zone in the outer city being 4 sen. The rail on this line is a very light section of T rail, and both this rail and the cars were formerly in use on the Tokyo horse tramways; the cars were first used on horse tramways in New York City before the days of electric street railways.

This concern is Sino-Japanese—the Japanese interest largely represented by the cars and materials furnished from Tokyo. There is very little real capital invested in the plant, and it is understood that the concern is not unduly prosperous. The service is not well patronized, as it is neither expeditious nor attractive.

Vladivostok Tramways

The electric tramways in Vladivostok at present total about 4 miles of route, and about 3½ miles additional are under construction. The present lines were under private ownership when the writer was in Vladivostok, but the new lines are being built by the city and the general opinion prevailed that the system would later be taken over by the city. The manager and engineer in August, 1917, was H. C. Schriber, and the principal owners were A. K. Gromadsky and H. A. Zimmerman. Current

is supplied from the city power plant. All the equipment is largely from German and Russian sources. Financially the concern was in very doubtful condition, and much trouble was being experienced with the employees in the operation of the lines.

Tsitsihar (Angangki) Light Railway

Head office: Tsitsihar, Heilungkiang, Manchuria. Management under the provincial governor of the Province of Heilungkiang.

The Tsitsihar Light Railway connects the Chinese city of Tsitsihar, capital of Heilungkiang, the most northerly Province of Manchuria, with New Tsitsihar, a new town on the Chinese Eastern Railway, about 18 miles distant in a southerly direction.

The Russians, in building the Chinese Eastern Railway, kept the line at this distance with the idea of the advantage that would accrue to them in the building of a new town inside the limits of the railway zone over which they claimed jurisdiction.

The line was built entirely with provincial funds and has always been controlled and operated by the provincial authorities. The construction was begun in September, 1907, and surveys were established two years later. It is stated that the capital expenditures have exceeded Tls. 240,000. The track is of meter gauge.

This light railway has at times been brought into prominence by the Chinchow-Aigun project, which is one of the concessions that has been negotiated for by American interests in competition with Japanese and Russian interests. The last phase was the signing of a preliminary agreement with a Russian concern for the construction of a line from Harbin to Aigun on the Amur River, and also a line from Tsitsihar that would connect with the above line at Mergur, which point is about half way from Harbin to Aigun.

The contract for the construction of this line was given to Telge & Schroeter, of Tientsin, who purchased all the roadway and track materials and rolling stock from Orenstein & Koppel, of Berlin. Mr. W. R. T. Tuckey, formerly of the Peking-Mukden Railway and now engineer-in-chief of the southern (British) section of the Tientsin-Pukow Railway, was engineer in charge of the construction of this line.

Manila Electric Railroad and Lighting Corporation

New York Office: 43-49 Exchange Place. Head office in Philippine Islands: Manila.

President	... ..	Charles M. Swift, Middlebury, Vt.
Vice-president	... ..	J. H. Pardee, New York City.
Secretary	... ..	J. W. Moffat, New York City.
Treasurer	... ..	R. B. Marchant, New York City.
Vice-president and general manager	...	C. N. Duffy, Manila, P. I.
Assistant general manager	...	L. S. Cairns, Manila, P. I.
Manager railway department	...	W. R. McGeachin, Manila, P. I.
Manager lighting department	...	J. C. Rockwill, Manila, P. I.
Superintendent tracks	...	C. E. Haygood, Manila, P. I.
Superintendent shops	...	F. J. Ten, Manila, P. I.
Chief engineer power plant	...	B. H. Blaisdell, Manila, P. I.
General attorneys	...	Lawrence & Ross, Manila, P. I.

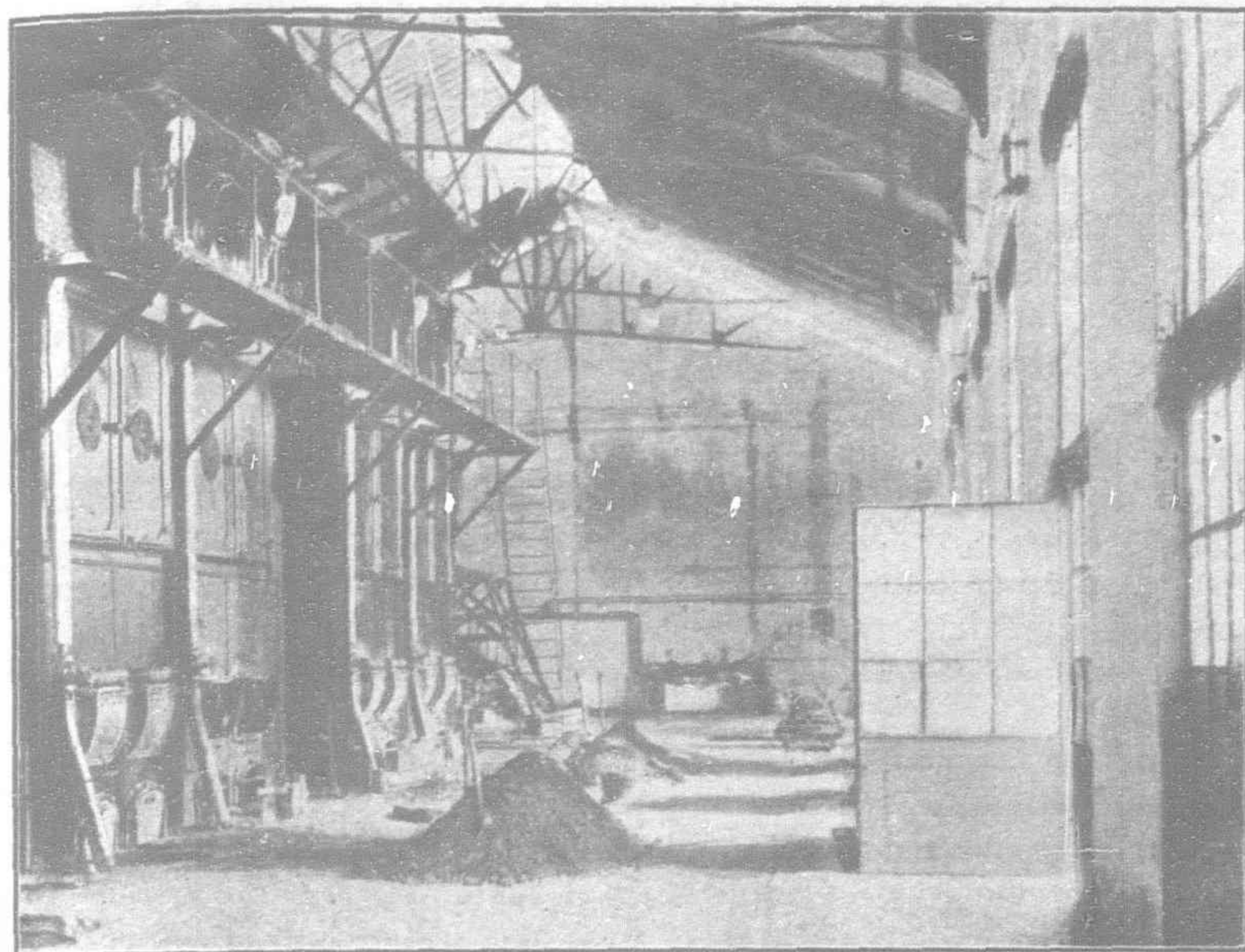
Location and Extent

The Manila Electric Railroad & Lighting Corporation owns and operates 33.1 miles of street railways, as well as the electric light and power plant supplying the entire city of Manila, and also controls and operates as a subsidiary the Manila Suburban Railways Co., with 12 miles of route running from Manila past Fort McKinley to Pasig.

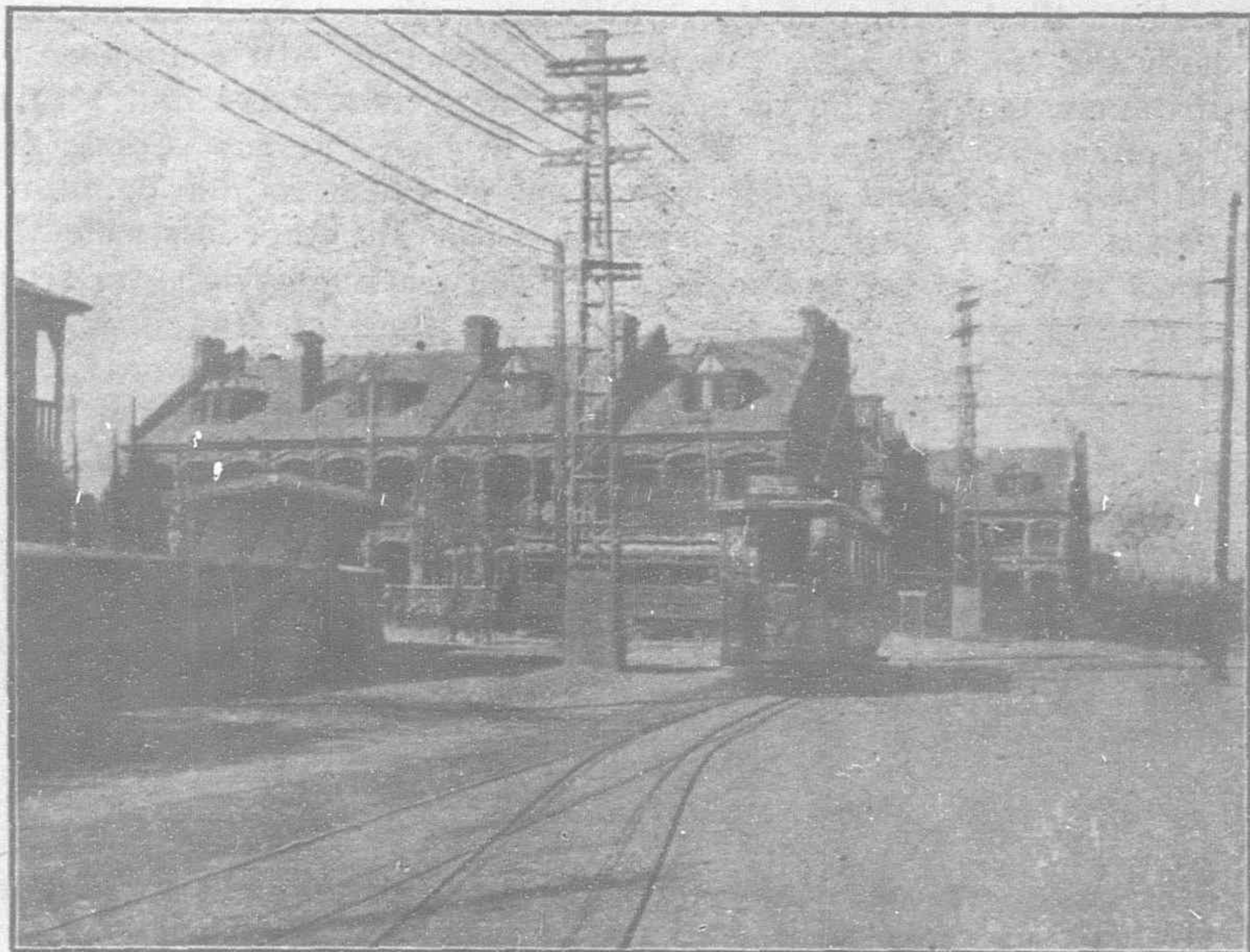
Present Control

The financing, construction, and reconstruction of these properties was carried out by J. G. White & Co., of New York, and they have since been, and are now, operated as one of the large number of properties managed by this organization. The capital for the reorganization, reconstruction, and new construction of the present plant was largely, if not entirely, from American and local Philippine sources.

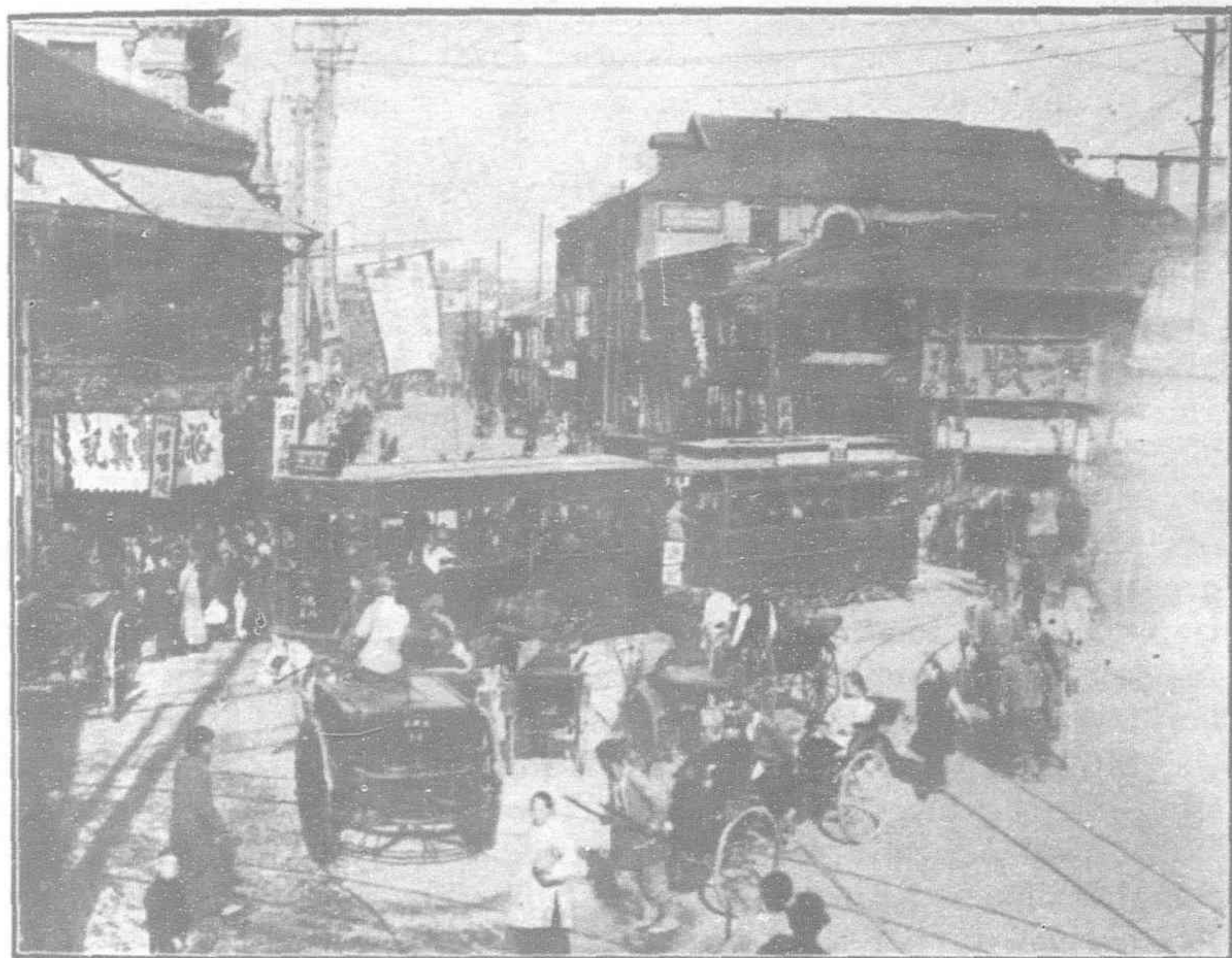
Shanghai's Electric Tramways



Electric Station at Lokawei—The Boiler Room



Corner of Avenue Joffre and Avenue Dubail



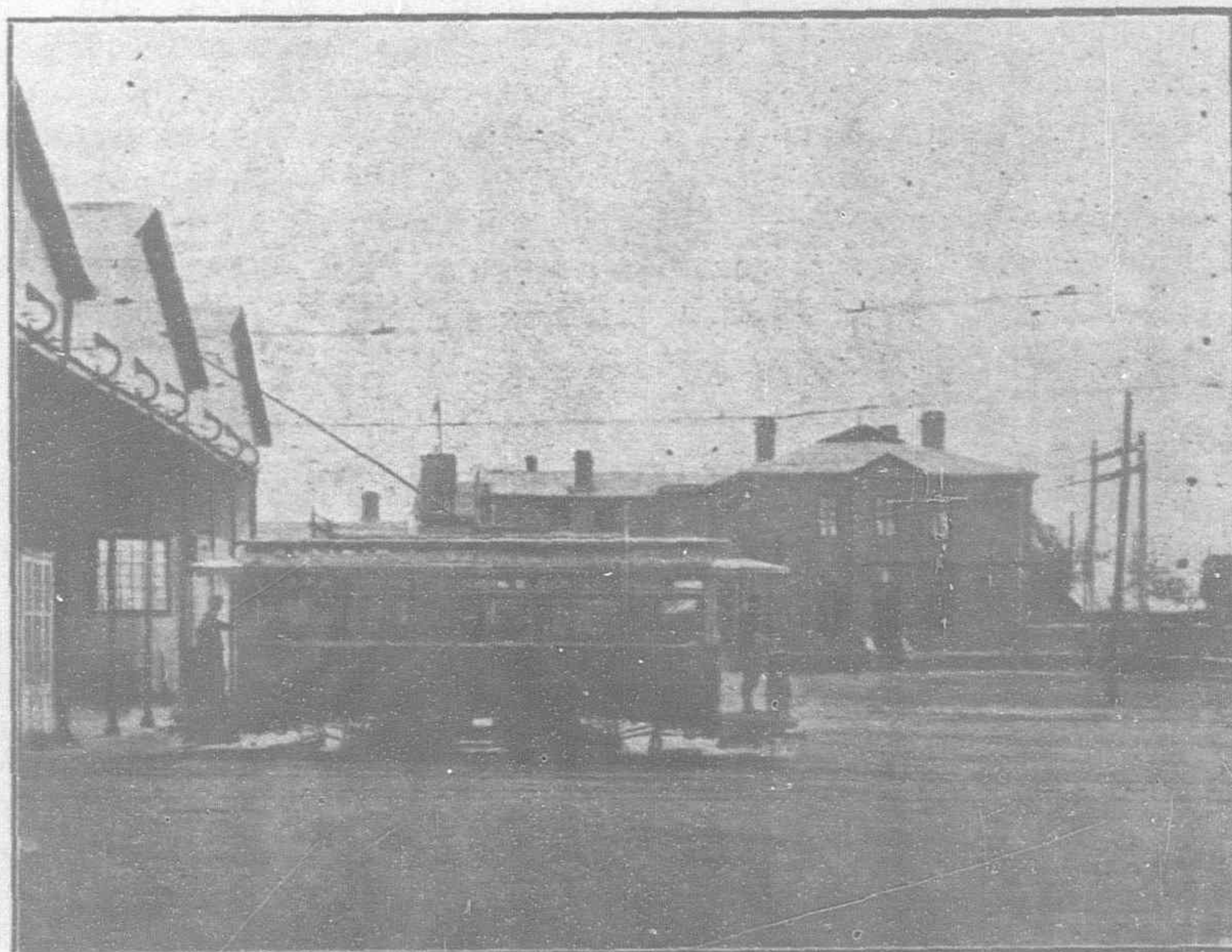
Foreign Settlement Trams—Corner of Nanking and Chekiang Roads



Foreign Settlement Trams—Corner of Seward and Minghong Roads



French Lines Terminus on Marche de l'Est



Lokawei—Office and Depot

Roadway and Power Plant

Some of the streets of Manila are narrow and crooked, making the building of street railways rather difficult as regards both the track and the overhead construction. In a number of instances the lines go in one direction on one street and return by an adjoining street. The tracks in busy, narrow streets are laid with 92-pound girder rail, some of which is now being replaced with a still heavier girder rail. In other districts the track is laid with 70-pound T rail. The track materials are from American sources and along American lines of standards and practice, including a considerable amount of special work. The same remarks apply to the overhead contact construction, some of which is rather complicated on account of the narrow and crooked streets.

There is one central power house, located on the Pasig River, which furnishes power for all the above railways and also all the commercial current for lighting and power in Manila and its suburbs. Fuel is handled in lighters directly to this central power house.

Rolling Stock

The car equipment for the city lines consists of 72 closed and 48 open passenger cars, 1 express car, 3 work cars, 1 wreck car, 1 town car, and 1 pole car, all of which are electrically equipped except 1 of the open passenger cars and the pole car. The suburban line equipment consists of 6 closed passenger cars and 7 freight cars, all of which are electrically equipped except 3 of the freight cars. While much of this car equipment is from American sources, a considerable part of it is of British and Belgian manufacture.

The cars of this type were fabricated in the United States according to plans and were shipped knocked down to Manila, where they have been very satisfactorily assembled and completed in the company's own shops. This arrangement is of special advantage in the saving of ocean freight charges. Particular attention is called to the roof arrangement of this equipment, which is so designed in order to keep out the very heavy rains during typhoon seasons.

Workshops—Organization

In connection with the general offices and central car barns the city lines have a reasonably well arranged and equipped shop for inspection and the making of all classes of repairs to the equipment, including the assembling and completing of cars, as above explained. The general storerooms are located at this same place, and here there is carried a carefully selected stock of stores, as is necessary at this great distance from sources of supply.

Purchases

Requisitions for purchases originate in Manila and are handled under the direction of the general manager's office so far as it is practicable to obtain supplies to advantage in Manila. Such articles as cannot be obtained there are ordered from the New York office of the J. G. White & Co. interests and purchases are made through the manager of purchases of the J. G. White Engineering Corporation at 43 Exchange Place, New York City.

Locomotives in Russia

"Locomotives!" is the cry in Russia now. The situation on the Russian railways will soon become a subject of discussion in all countries and in the international business world. It is therefore of general interest to give a few facts about the original causes and the extent of the transportation crisis, says Michael Farbman in the "Chicago Daily News." The breakdown of the Russian transportation system was obviously caused by the decline of production during the war and the revolution. However, the fault rests primarily with the incompetence of the czar's government, which attempted to meet the financial crisis

following the Russo-Japanese war by curtailing the railway estimates. Extensive projects for the enlargement of the railway system were abandoned, and, what was still worse, the programme for renewing the rolling stock was reduced by about two-thirds. Against 1,300 locomotives built in 1906 only an average of 500 were built for the next seven years. In 1913 only 311 were built. Russia, therefore, entered the great war with greatly diminished rolling stock, which hastened the breakdown of the transportation system.

Unfortunately, the policy of M. Wuchlov, the railway minister, affected also the means of repairing the rolling stock. He refused all credits to keep up the equipment and the renewal of the machinery in the repair shops, and stopped the plan for erecting large modern shops for the repair of locomotives on a large scale. In 1914 Russia had less than 20,000 locomotives on a railway system of more than 64,000 versts (42,240 miles). Of these 7 per cent. were more than forty years old, 10 per cent. more than thirty years, 6 per cent. more than twenty years, 39 per cent. more than ten years, and only 38 per cent. under ten years.

Before the war the average life of a locomotive in Russia was twenty-five years—twice as long as in America—but during the war Russia was obliged to adopt the American system of the intensive use of locomotives. Competent railroad experts considered that of all the locomotives constructed before 1914 only a few—probably less than 100—were left intact. Therefore only those locomotives built or imported since 1914 are to be taken into consideration at present. Of such there are only 3,765, including 3,000 built in Russia in the last six years and 765 imported in 1916 and 1917. This, in round figures, provides 4,000 locomotives for about 50,000 versts (33,000 miles) of railway, or eight locomotives for each 100 versts (sixty-six miles).

These figures alone sufficiently explain the collapse of the transportation system, but the condition of the repair shops must be considered as well. In 1914 the normal rate of disabled locomotives was 15 per cent. Now it is almost 60 per cent. At present Russia possesses 4,000 locomotives in good working order and 6,000 needing repairs. The whole energy of the administration is being put into the repair work. All workers—railroad as well as other metal workers—are summoned. For the repair of locomotives and trucks special premiums are given. The greatest attraction is the right to use the repaired train for one trip to bring food to be distributed among the workers in the factory which repaired the train. The condition is that the train must be repaired during overtime periods. According to the latest reports the administration has already succeeded in stopping the increase in the percentage of disabled locomotives. With special repair factories starting work all over the country the government believes that it will be able to repair most of the locomotives during the next few months.

Still another concern of the government is the increase in the efficiency of the lines. According to the latest reports the number of trucks moving with food on the railroads has increased in the last fortnight by 45 per cent., while at the same time the number of loaded trucks standing idle at the stations decreased 16 per cent. during the first half of February and 52 per cent. during the last half.

Yet the transport crisis is very grave and will remain so until Russia gets more new locomotives. Can Russia build them herself or is she entirely dependent upon America and Europe to supply them?

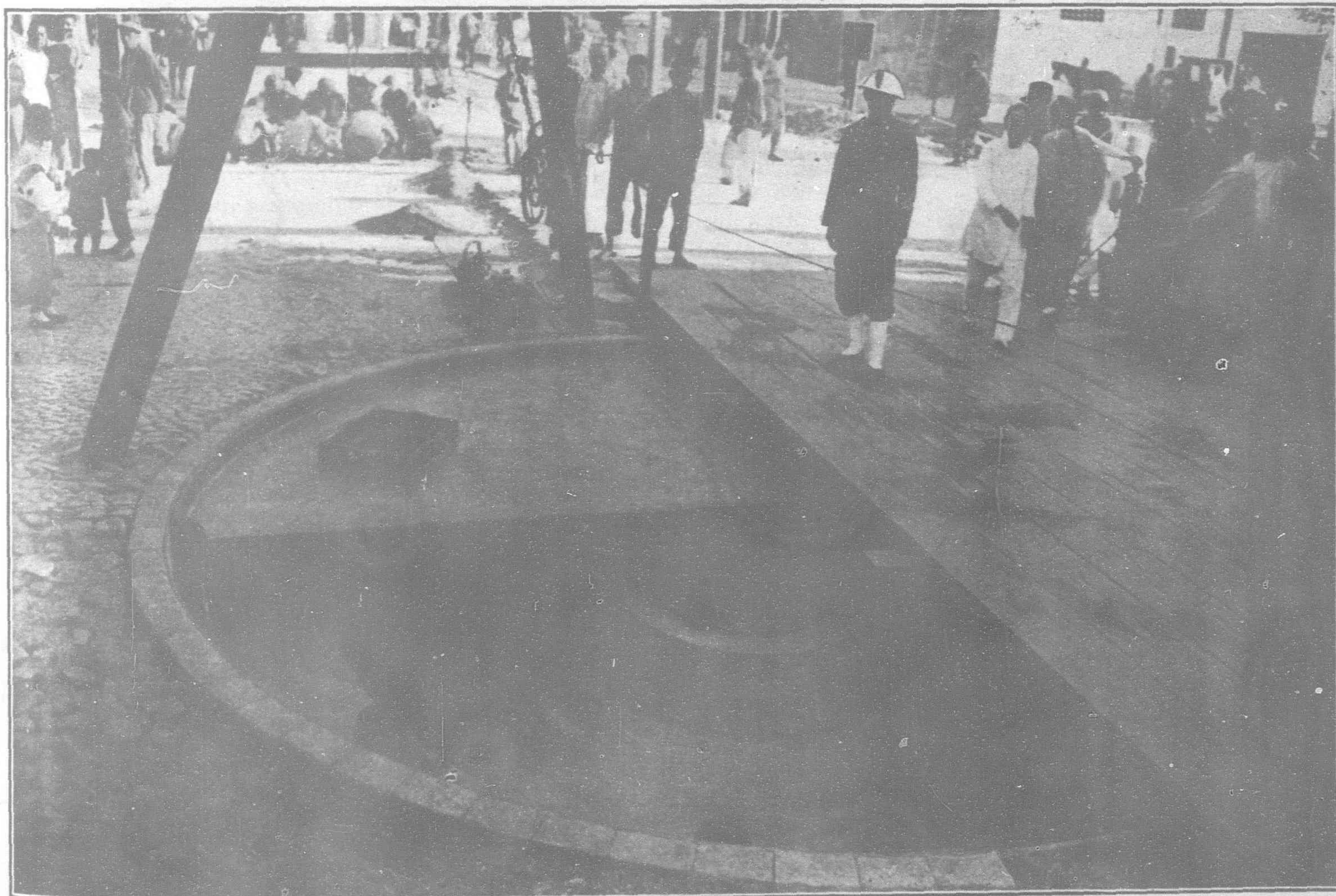
New Map of Shanghai

The past three years have seen more expansion and development in Shanghai than all the previous thirty. Consequently a new map of Shanghai becomes a necessity. The New Map of Shanghai and Environs, published by the "North-China Daily News" bears the signature of the Acting Engineer and Surveyor of the Shanghai Municipal Council and possesses the accuracy and information which are the essentials of a good map. It is drawn to scale and printed in colors. Its size is 60" x 31", its cost is \$3 unmounted, and \$5 mounted for hanging.

Shanghai's Electric Tramways



Car Depot at Shanghai



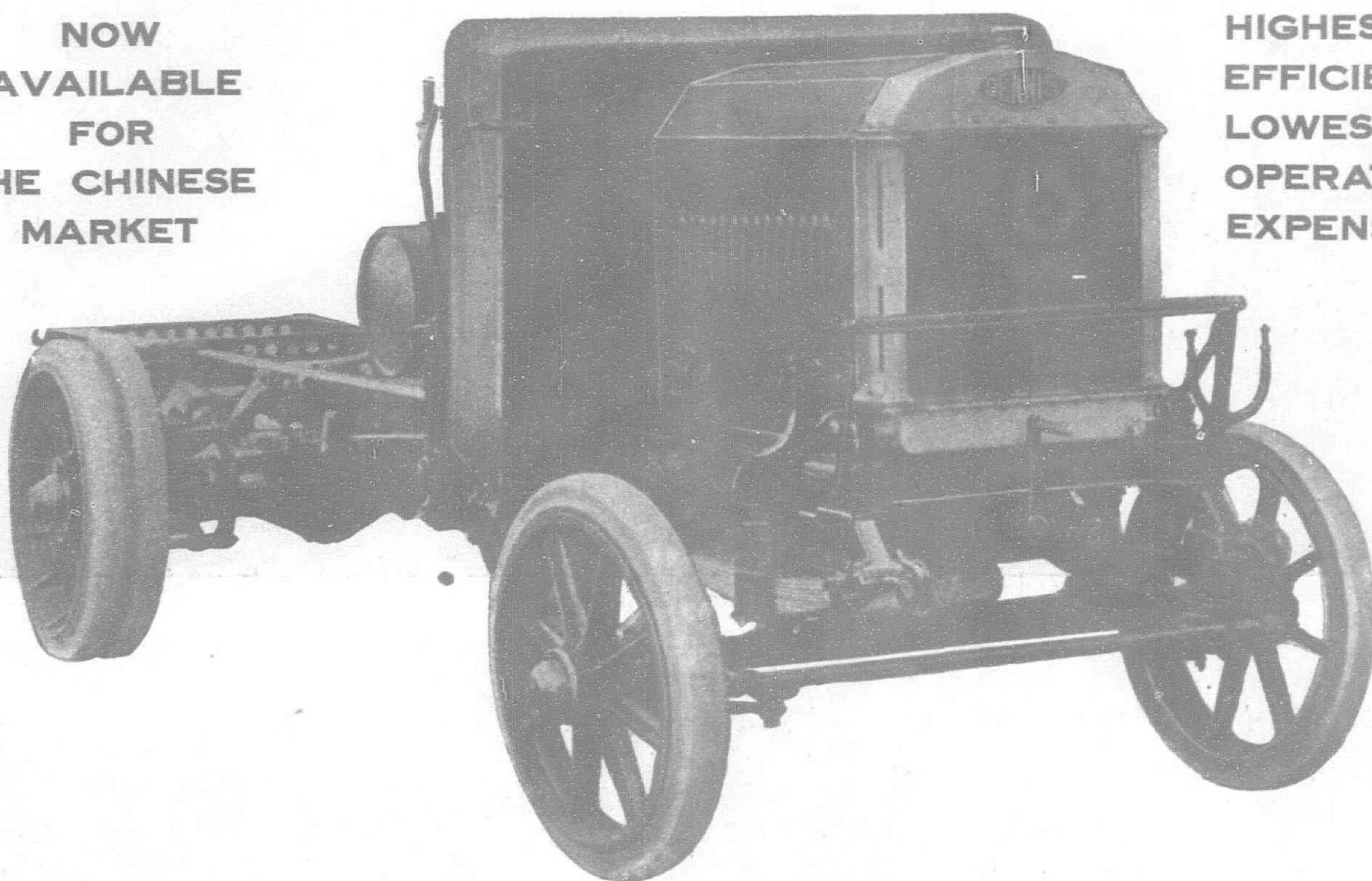
Turntable at Shanghai for Railless Cars

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THE CHINA GARAGE CO.

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SHANGHAI

21 FOOCHOW ROAD

The Asiatic Importance of Modern Motor Transport

Interesting Facts Cited by Sir Raymond Dennis and the Phenomenal Growth of a Big British Industry

ON land, on sea, and in the air, the motor has proved to be *the* thing. It spells safety, stability, speed. A big figure in the motor world, as he is an outstanding personage in the British Empire of industry, Sir Raymond Dennis, K.B.E., co-founder and one of the managing directors of Messrs.

Dennis Bros., Ltd., of Guildford and Coventry, England, is more given to work than to talk. His work and that of his famous firm saved precious lives for England and civilization during the winning of the war. Now that the Dennis energies are released for the happier conquests of peace, Sir Raymond is making a tour of the world, appointing new agencies, going over the whole motor field, bracing the good roads movement by the power of the Dennis products.

The hope of Asia lies in more and better roads. The ever-present graves of China speak of spectres of the past that blight and block the pathway to real Chinese progress. When Young China recognizes this fact, self-help will begin to solve the more pressing Chinese problems. This star of hope can be found by the headlight of the motor.

Men who talk least, say most. They think. Thought counts. Sir Raymond Dennis impresses *The FAR EASTERN REVIEW* as a thoughtful man who sees a long way ahead. During his recent visit to Shanghai, he was reluctant to talk for publication until it was pointed out to him that he could render a public service by opening his mind to *The FAR EASTERN REVIEW*.

"That, of course, makes a difference," he admitted. "It certainly does," prompted our expectant interviewer. Then, the silent motor magnate said this:

"On the 5th of November last Sir Eric Geddes, minister of transport, made the statement that the internal combustion engine had won the war in the air, had been the heart and soul of the tank and had provided the all-important transport on the

roads. This truth was re-stated in another form by Prince Arthur of Connaught, who was with our armies in France, when he declared his conviction that without our wonderful system of motor transport it is quite probable that we never should have been able to win the war at all."

"All the world knows," said Sir Raymond, "that the taxi-cabs and omnibuses of Paris saved that city from the Hun in 1914, just as it was the carefully organised system of motor transport that enabled the Home Government to resist successfully the lightning railway strike that so seriously menaced the life of the nation last autumn."

It is well known that in addition to the transport of troops and munitions the internal combustion engine supplied the motive power for travelling workshops which were invaluable in repairing all mechanical appliances of war, including aeroplanes, while by the same means mobile searchlights were most effectively used not only in the war area proper but also during the air raids over London and other cities.

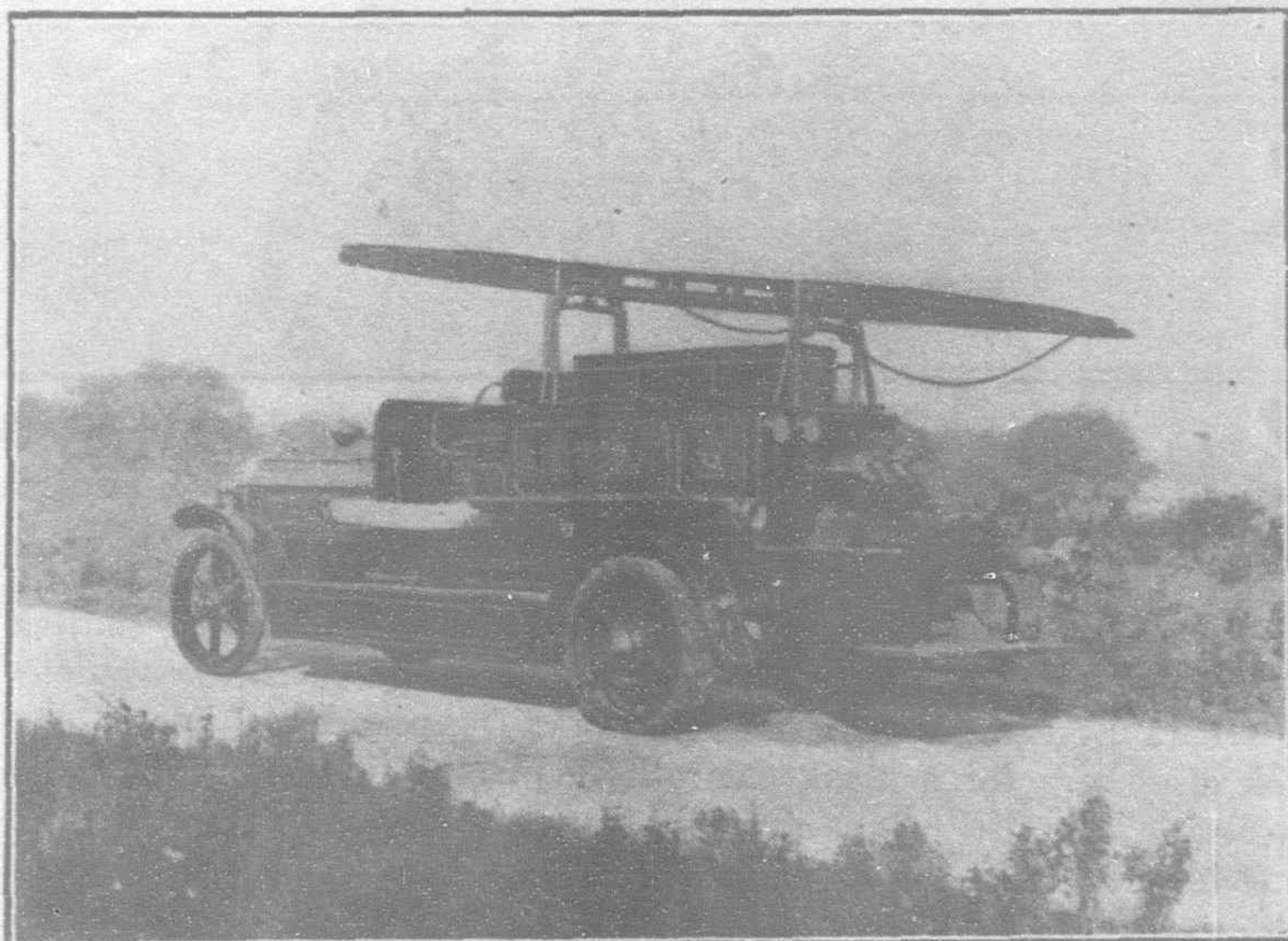
Sir Raymond Dennis mentioned to our representative another use to which



Sir Raymond Dennis, K.B.E.



"War Office Subsidy" Dennis 7½-ton Lorry, 7,000 of which were supplied to the British Army during the War

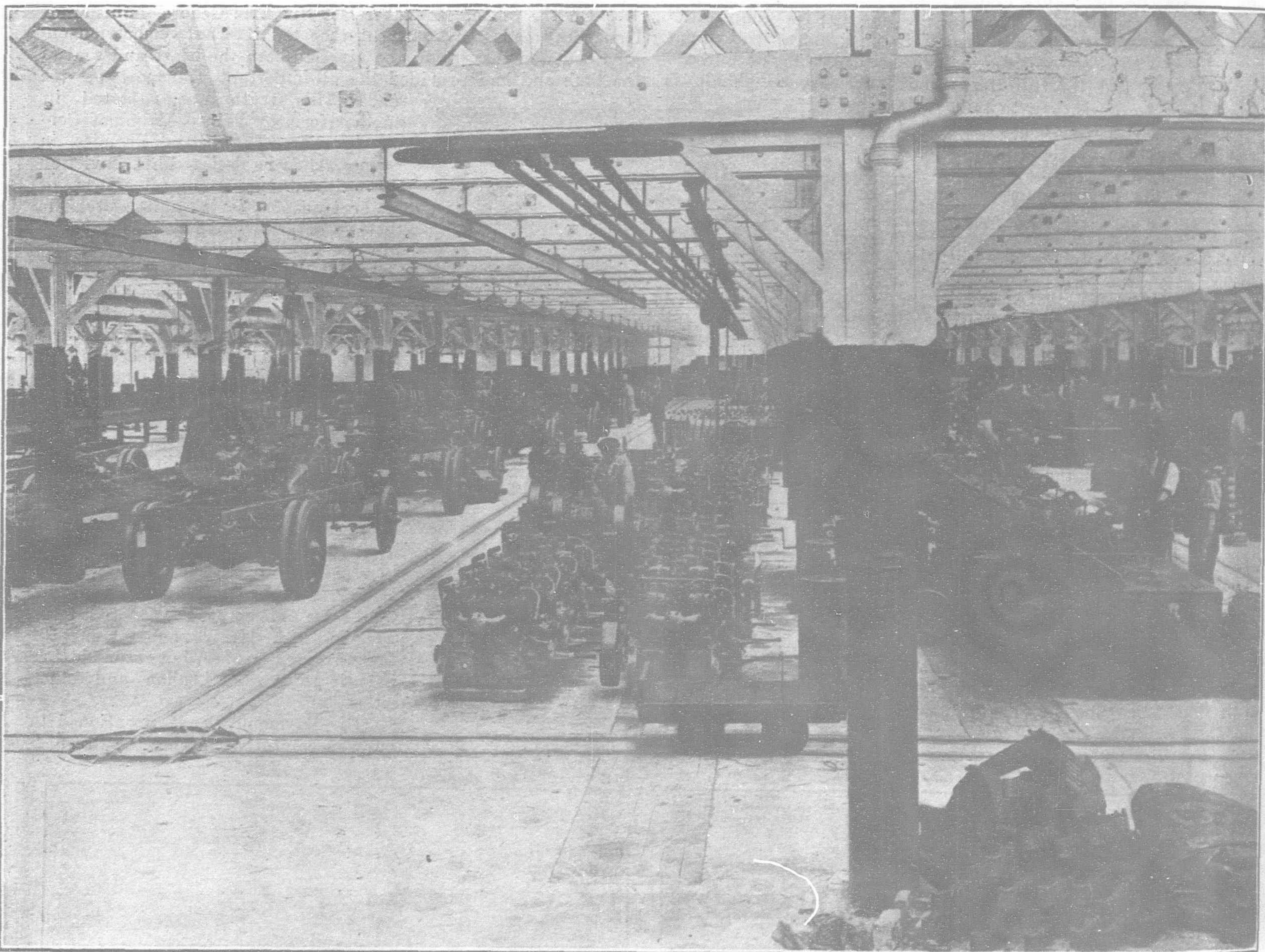


The first Motor Fire Engine to be sold to a Chinese Fire Department—Several now on Order

the internal combustion engine was put, in which his firm was concerned when the Somme rose in flood in 1916 and allied troops were fighting waist deep in water. In this serious situation, the French government sent over to England an officer to obtain a pumping set that would help to reduce the floods. This officer visited Guildford and placed his mission before Dennis Bros. who immediately set to work, designed and despatched, within 48 hours, a pumping equipment that would operate continuously and had the appliance working on the Somme front in less than a week. This was the first of some hundreds of similar stationary pumping sets supplied by the firm, the bulk of which were used to pump fresh water to the troops in the front line from stations that in many cases were miles in the rear.

need throughout the whole world for mechanical transport and the immense possibilities for its development overseas, the firm has definitely ear-marked a large number of lorries for export and some hundreds of the W. O. Subsidy model, of which no less than 7,000 were supplied to the military authorities during the war, will be shipped to India, the Federated Malay States, Java and the Far East during the current year.

The importance that Sir Raymond Dennis attaches to the development of overseas trade is evident from the fact that he is personally making a tour of the world for the purpose of investigating local conditions and needs and of enabling him by inquiry on the spot and by his own observation to select the most suitable firm to act as sole agent for Dennis vehicles and it is this which brought him to Shanghai after visiting India, Burma,



One of the Bays in the Erecting Shop of the Big Dennis Factory. The Engines in the centre are waiting to be erected.
Every 90 minutes a Dennis Lorry leaves the Factory under its own Petrol

That motor transport will play as important a part in industry and the peaceful arts of Commerce as in the stern conflict of War is an accepted truth and the demand for motor vehicles in Great Britain is such that Messrs. Dennis Bros. need not look elsewhere for a market for their productions for some years to come, in spite of the fact that their output is already 50 lorries per week and will be doubled so soon as the White and Poppe factory at Coventry has been completely reorganized from war to peace conditions. This factory received the honor of a visit from the Queen-Emress and Princess Mary during the war when it employed over 14,000 hands. With a view, however, of fostering overseas trade and re-establishing those civilian connections that were ruptured by the war, and realizing the

Ceylon, Straits Settlements, Federated Malay States, Java and Hongkong.

Importance of "Service"

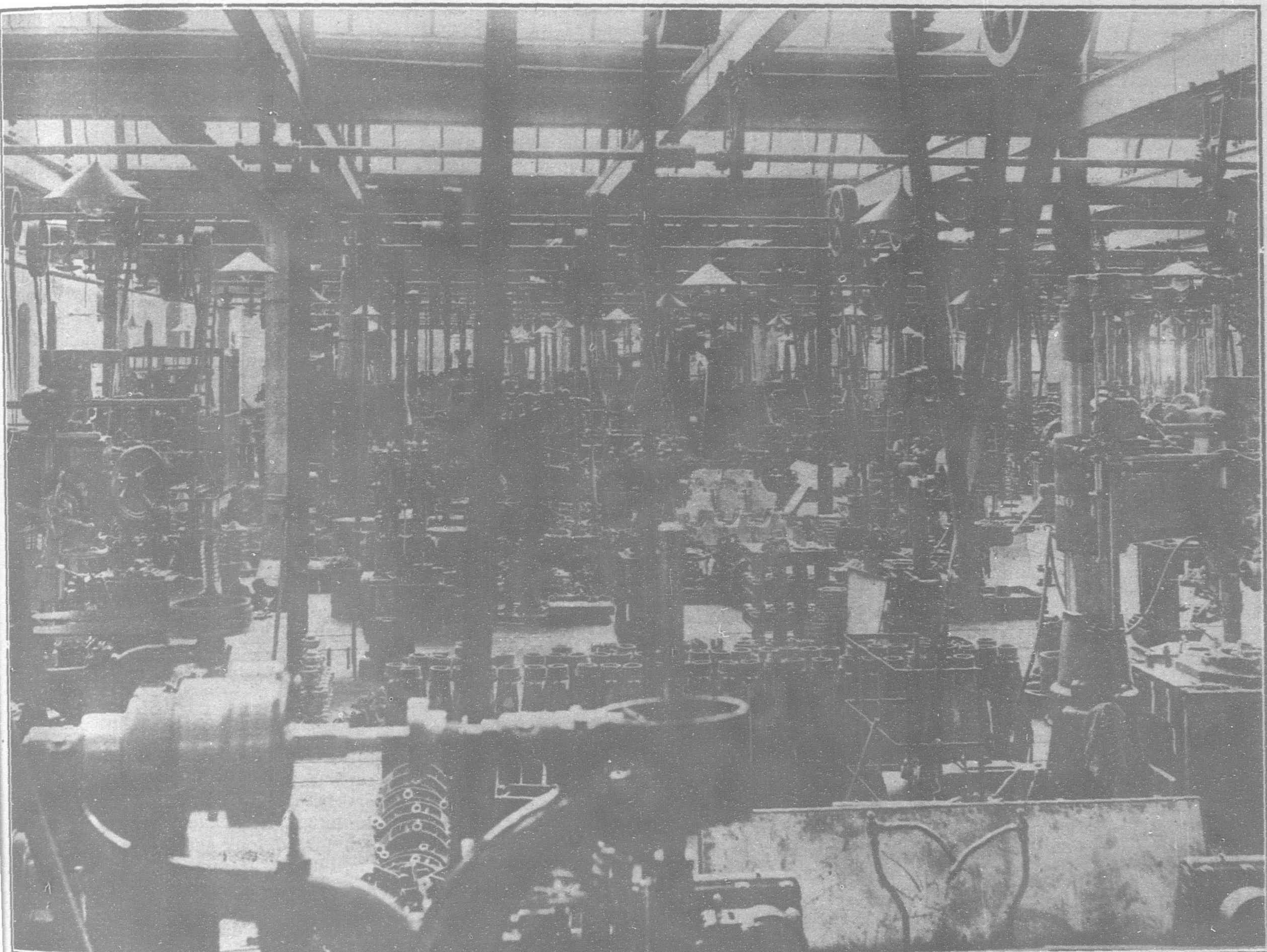
Sir Raymond Dennis considers, very properly, good "service" to be essential to any agency and to secure this to users of his machines not only will very large stocks of spare parts of Dennis machines be held by all sole agents but each agent will have on his staff a fully qualified Dennis engineer.

Messrs. Dennis Bros., who were the pioneer of the worm drive, were the first to adapt the turbine pump to motor fire engines of which they are the biggest manufacturers in the world and they

standardise on two models, namely,—60 h.p. and 75 h.p. with a capacity of 550 gallons and 450 gallons per minute respectively. Very large numbers of these machines were supplied to the Imperial authorities during the war to safeguard important docks, stores and munition factories, such as, Avonmouth, Richborough, Vladivostok, Gretna, Basrah, Baghdad, etc., and at the great Salonika fire two engines established the splendid record of operating continuously for 11 days and 9 days respectively without a stop. No less than 168 Dennis fire engines are in use by the London Fire Brigade and they are installed in most of the chief cities of the East, including Calcutta, Colombo, Singapore, Kuala-Lumpur, Ipoh, Penang, Nanking and Tientsin. Several are possessed by the Shanghai Fire Brigade and deliveries will shortly be made to the City Brigade.

when the government contracts were completed, in some cases not till long after the armistice was signed, all such factories had to be re-converted to their peace-time products.

"This involved not only the replacement of machinery but the designing of a new model which, in all its stages, is a matter of many months work for whereas my firm was enabled to profit from the experience gained through the rough usages of war by ascertaining and eliminating any source of weakness disclosed by the abnormal streams to which our machines were submitted the manufacturers of touring cars had to produce a model to compete with the cars of American manufacturers who had not only been making them throughout the war but were able to adopt new ideas and improvements. It is not surprising, therefore, that a considerable period of non-production amongst British car manu-



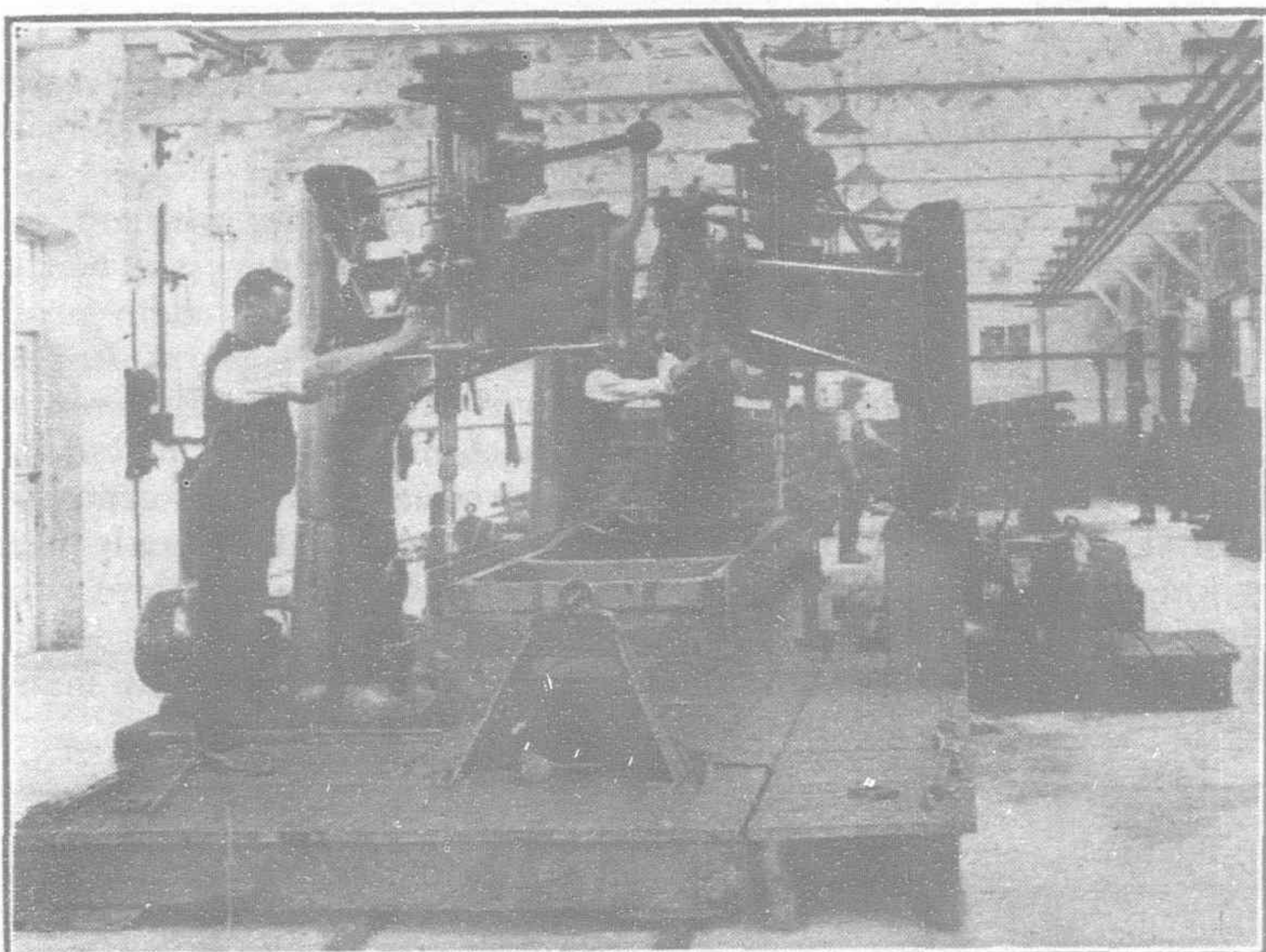
This Machine Shop contains over 600 Machines continuously employed in the manufacture of Dennis Units

Sir Raymond Dennis referred to the complaints frequently levelled against the British motor industry that the trade is too slowly recovering from war conditions and allowing foreign competitors too clear a field. "Such criticism," said Sir Raymond, "is made without a full realization of the difficulties to be contended with. In the case of my own firm, we were extremely fortunate in that our production were so urgently in demand that throughout the whole period of the war we not only devoted the whole of our energies to our standard manufactures but at the request of the authorities, we made important extensions which very materially increased our output. Many factories, however, were diverted to the making of munitions, aeroplanes or other war material and

facturers supervened after the cessation of hostilities but I have complete confidence in the ability of the trade to regain its former ascendancy in the production of high class machines which was threatened by the cessation of their normal business during the war, and in very much larger numbers than hitherto.

Mass Production and Standardization

"During the war," continued Mr. Dennis "we have developed at our Guildford works our system of mass production and have standardised our War Office subsidy model (4½ tons gross, 3½ tons net load) and all Dennis machines of this capacity are practically identical with, and contain all the improvements which our war experience has enabled us to introduce from time

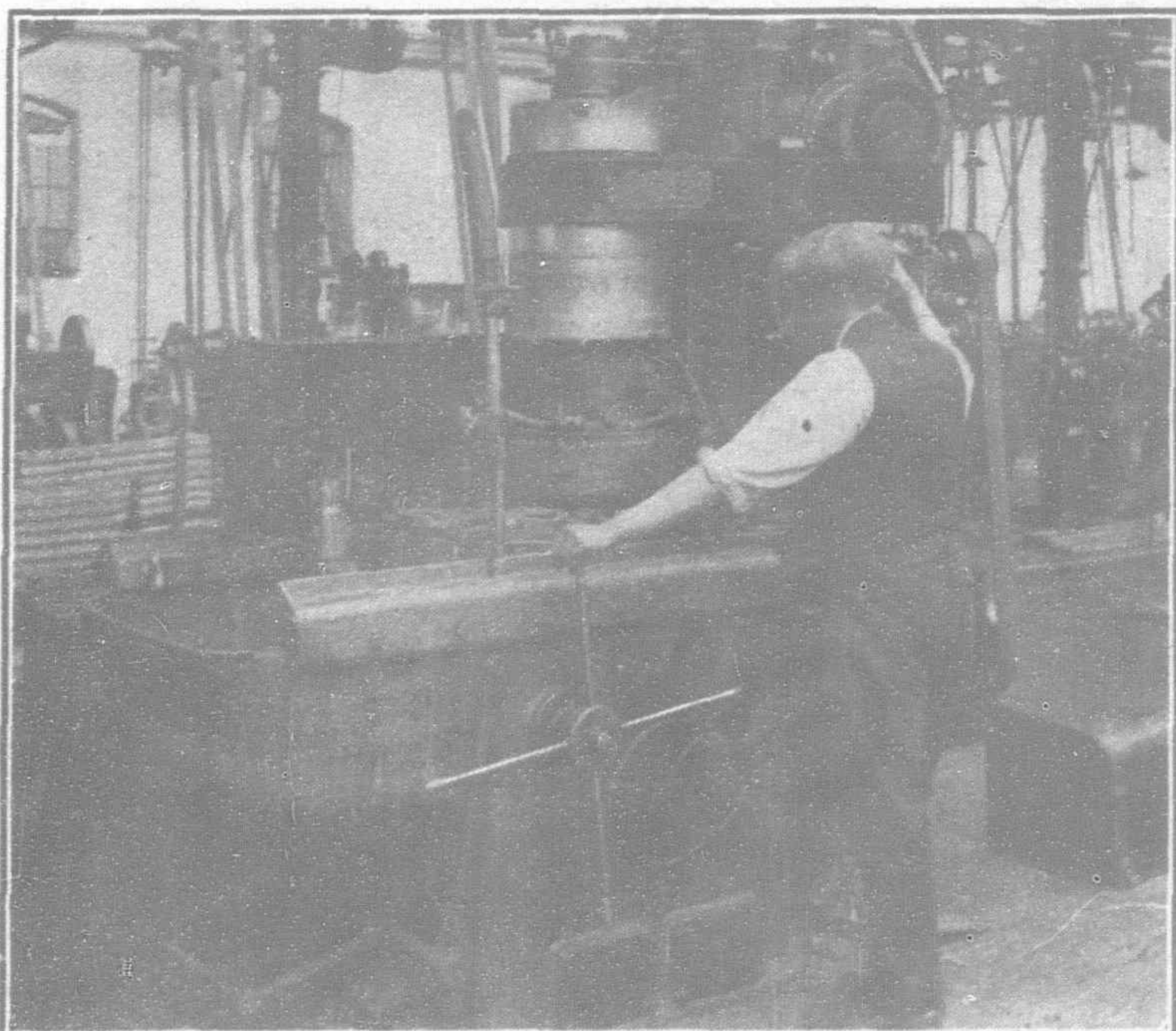


Three Large Drills engaged on Frame drilling in the Dennis Factory. All the holes are drilled by Jig. During this Single Operation, 217 Holes of Various Sizes, ranging from $\frac{3}{8}$ in. to $1\frac{1}{2}$ in.—fifteen sizes in all—are Drilled by the Machines shown in this picture

to time in the machines supplied to the military authorities who took delivery of 7,000 of this model, while those consigned to tropical countries are fitted with our new "Colonial" radiator which, by its much greater cooling surface, prevents the water from over heating.

"Immediately hostilities ceased we began preparations for the production of a 2 ton model for which we anticipated there would be a considerable overseas demand in countries where the bridges are at present not strong enough for the heavier type of machine and it is an interesting commentary on the alleged delay in getting back to peace time production on the part of British manufacturers, that with all the advantages of pre-war conditions in our factory, it will not be until next month, or some 22 months after the armistice, that we shall be in a position to make deliveries of this new model. This length of time is, it is true, partly the result of the great labor unrest at home and the strike of the moulders and iron foundries and other unions but the pleasure car manufacturer, has had the like difficulties to contend with."

During his sojourn in Shanghai, Sir Raymond Dennis was very favorably impressed by the competent and enterprising business management through which Mr. C. J. White has brought



The Blanchard Surface Grinder at work in the Dennis Factory. The Magnetic Plate Draws and Holds in Position the part upon which the Machinist is at Work

about the great success of the China Garage Company. Consequently, the Dennis agency for Central China has been placed with this go-ahead concern. Mr. White sees a big future in this field for the Dennis products. He says that now that government officials are going heartily behind the good roads movement and lacking their pledges by actual road-building, there is certain to be a large and constant demand for Dennis trucks. He has already placed good orders and there are numerous inquiries for terms and immediate shipment. The South China agency is being handled by Alexander Ross and Company, Ltd., Hongkong.

Japan's Heavy Steel Imports

One of the most interesting and striking features of the export trade of the United States in iron and steel in the last three or four years has been the tremendously heavy buying by Japan. It has been and is a subject of much comment in trade circles. This buying and its beginning during the war, which was not so much of a surprise, but that it should continue thereafter and intensely throughout 1919 and up to the present time has been the surprise. This has elicited even more comment. It has even been said that Japan's purchases of copper and zinc, taken in conjunction with her heavy buying of iron and steel, meant a development of a Germany of the East.

An analysis of the official export data of the United States shows distinctly the trend of this striking movement to Japan of American war and steel products. It is found that exports of the principal iron and steel products to Japan, so far as classified as to destination, reached in 1919 a total of 606,437 gross tons, unequalled even in the war years. In 1917 this total was 490,191 tons and in 1918 it was 368,097 tons. The war expansion over the post-war movement is realized when it is stated that in 1913 this same total was only 47,794 tons. Summarized in the form of a table, these facts are as follows:

TABLE OF EXPORTS OF AMERICAN IRON AND STEEL TO JAPAN IN GROSS TONS.

	1913.	1917.	1919.
Wire nails	—	11,766	16,216
Cast pipe and fittings	4,386	4,876	1,210
Wrought pipe and fittings	6,130	19,271	25,652
Rails	20,820	75,113	152,997
Galvanized sheets	—	4,411	5,943
Steel plates	7,250	257,739	243,683
Steel sheets	—	33,366	38,118
Structural steel	8,981	35,514	49,920
Tin plates	227	21,869	45,463
Barbed wire	—	187	377
Other wire	—	22,091	26,648
Totals	47,794	490,191	606,437

The outstanding features of these data are the great expansion in steel plate exports which in 1919 nearly equalled the war exports in 1917, or 243,683 tons, compared with 257,739 tons, being insignificant in 1913. Rail exports were equally striking in 1919, having been 152,997 tons against 75,113 tons in 1917 and only 20,820 tons in 1913. The same is true regarding structural steel, tin plate and wire, as well as wrought pipe and fittings. It is interesting also to note that the decline last year in exports of cast pipe and fittings is due to the expansion in the manufacture by Japan herself of these from pig iron largely bought from the United States.

In this connection it is of value to compare British exports to Japan. So far as classified, these consisted principally in the years under discussion of pig iron, wrought iron bars, steel bars, tin plate and galvanized sheets. The total of these exports from Great Britain to Japan in 1913 was 183,861 tons. These dwindled to only 8,019 tons in 1917 and to 11,731 tons in 1919. It is thus seen that, while the recovery is slow, it still has a long way to go to reach the 1913 record.

How long this outgo of American iron and steel to Japan will continue is a matter of conjecture, but it is believed that it will go on for some time, as Japan's rise to a prominent position in Oriental trade and perhaps in that of the world is likely to extend rather than diminish.



Passenger Motor Car and Freight Locomotive in Operation, South Manchurian Railway's Electrified Lines

The Fushun Colliery and Power Plants of the South Manchurian Railway

By S. Nakaya, Chief Engineer, Fushun Colliery, and J. R. Blakeslee, Foreign Department, General Electric Company

THE South Manchuria Railway is a standard gauge steam road located in Manchuria, and it extends from the seaports of Dalny and Port Arthur to Changchun where it connects with the Chinese Eastern Railway, which in turn connects with the trans-Siberian Railway. A branch extends to the port of Antung, connecting with the Korean Railway. A further branch extends to the Fushun Colliery, passing through the city of Mukden where is located a modern lighting plant equipped with a Curtis turbine.

The coal mines in the Fushun district were first worked by the Koreans 600 years ago, the coal being used by them in baking earthenware. On the occupation by the Chinese, mining was entirely suspended. During the Russo-Japanese war the mines were worked on a small scale by the Russians, but not until 1907, when the property was transferred to the South Manchuria Railway, was mining undertaken on a large scale.

The coal field covers about 19 square miles and coal is mined from the Chien-chin-tzai, Yang-pai-pu, and Lao-hu-tai pits, from the Oyama and Togo shafts, and open-cut mining is carried on at Ku-chen-tzu. A new slope has also been recently opened at Wau-tah-oh.

The main coal bearing district consists of shale with a thick coal seam. The shale overlying the coal is very thick and partly bituminous, being about 2,000 ft. measured by outcrops. The seam varies in thickness from 78 to 280 ft.; and the coal obtained is

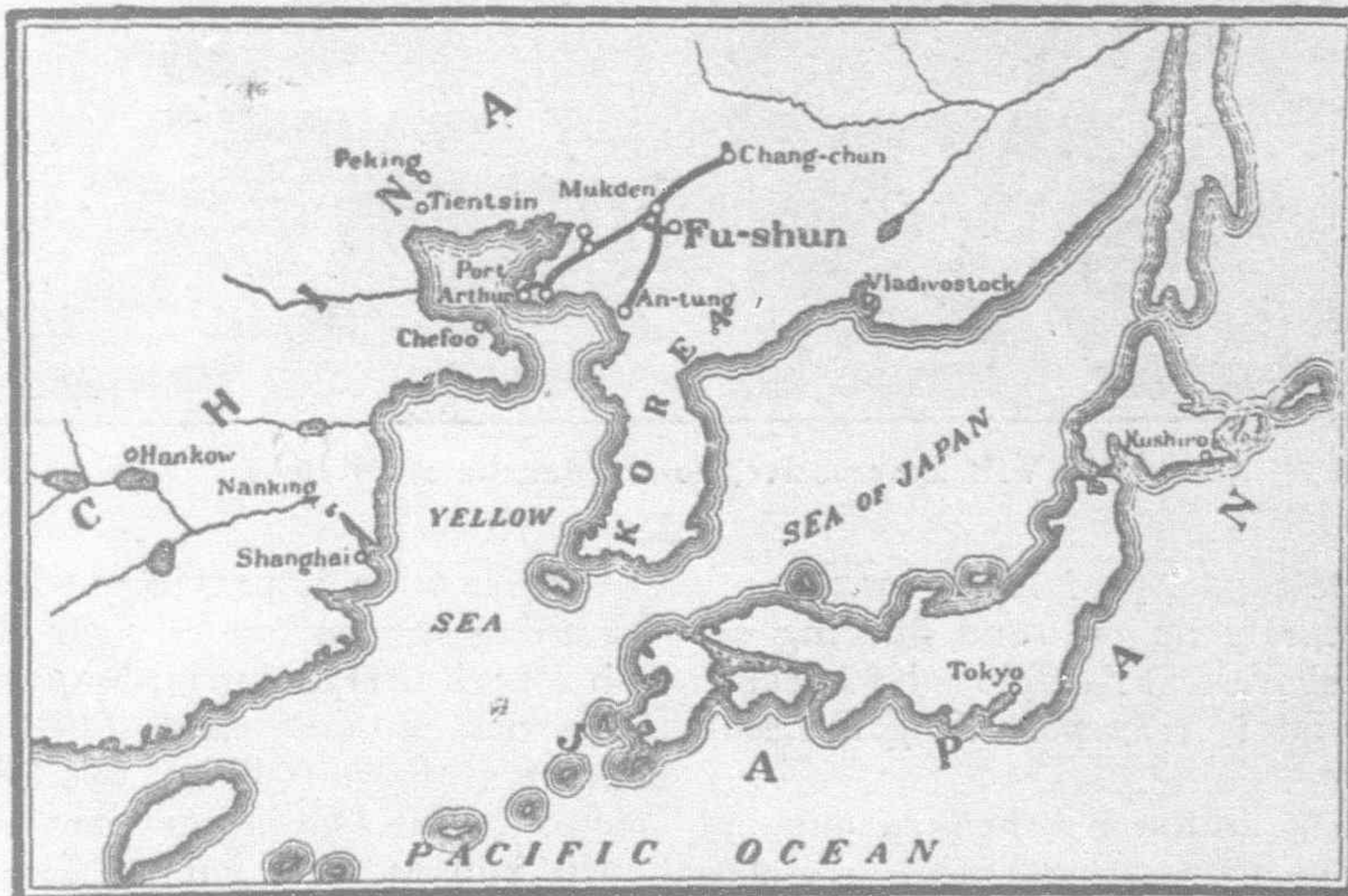
bituminous caking of a very uniform quality and is especially suited for gas making and steam raising. The analysis of an average sample follows:

Moisture	...	...	...	...	7.00 per cent.
Volatile matter	...	...	...	...	40.00 per cent.
Fixed carbon	...	...	...	...	48.00 per cent.
Ash	...	...	...	...	4.00 per cent.
Sulphur	...	...	...	...	0.80 per cent.
Specific gravity	...	...	...	...	1.28 per cent.
Heating value per lb. of coal	...	...	...	...	12,400 B.t.u.

There are at present two power stations which supply three-phase 60-cycle 2,200-volt current to all the pits, electric railway, electric lighting both on the surface and underground, and the electro-chemical industry.

Plant No. 1 is a steam-power plant, coal being burned in the boilers for raising steam. This station has a capacity of 4,500 kw. in high-pressure condensing turbines and is equipped with Babcock and Wilcox boilers, mechanical stokers, and superheaters. The station auxiliaries are either motor- or turbine-driven.

Plant No. 2 with a present capacity of 3,000 kw. in mixed-pressure turbines is connected in parallel with station No. 1 and runs continuously at full load, while the latter takes care of the peaks. The boiler equipment consists of eight Babcock and Wilcox boilers designed to



Location of Fushun Colliery and the South Manchurian Railway

burn Mond producer gas. Arrangements are also made so that four units may be coal fired, while one is also designed for tar firing.

Fushun coal has a very high percentage of nitrogen, the nitrogen content averaging 1.8 to 2 per cent. This quality of coal offered an inducement for the installation of a gas plant equipped to recover ammonia. Accordingly, in 1914 the company installed a plant consisting of ten Mond single-shell type gas producers with a capacity of 240 tons of coal per day, and as a by-product obtain 95 lbs. of ammonium sulphate per ton of coal gasified. The operation of the producers is as follows:

The air required for gas generation is first blown into an air saturator by engine-driven blows. Here the air is heated and saturated by hot water conducted from the coolers. On leaving the saturator, the moistened air is mixed with low-pressure steam from the turbines and then collected in the air main from which it finally enters the producers through the superheaters where it is further heated by hot gases.

Gas from the superheaters is conducted to the gas collecting main, then passed through mechanical washers where it is cleaned of dust. It subsequently passes into the ammonia absorbers in which it comes into contact with a spray of acid which recovers the ammonia in the form of ammonium sulphate. Thus freed of dust and ammonia, the gas is collected through two coolers into a gas holder, and there held ready to be served as fuel to the boilers by centrifugal exhausters.

This application of gas-producer plant, gas-fired steam boilers, and mixed-pressure turbines for supplying the necessary low-pressure steam to the producers, is probably the first of its kind ever tried; and six years experience has proved the operation to be very economical.

The heavy demand for ammonium sulphate and the rapid progress in developing the mines necessitated the extension of the plant. There are now two banks of eleven producer sets and three 3,000-kw., 0.8 p.f., three-phase, 60-cycle, 2,200-volt Curtis turbines running at 3,600 r.p.m. Two of these units operate condensing and one non-condensing, the exhaust steam being used by the producers. The two stations operating together have an ultimate capacity of 16,500 kw.

The mines are operated principally by the sand flushing or hydraulic storage system. Steam shovels are employed for sand excavating and the flushing material is transported by a 1,200-volt direct-current trolley railway.

The open-cut coal mining system at the Ku-chen-tzu mine is unique. This location comprises about 50 acres of nearly flat farm land underlying which coal is found at a depth of from 30 to 250 ft.; it is estimated that this district contains not less than

6,000,000 tons. At the present time soils and shales have been cleared from a space of 8 acres, and the coal is worked by cutting steps downward in the form of a large basin. There are now nine steps each 12 ft. high and the coal is removed by hand shoveling. Work proceeds continuously and the working surfaces are lighted at night by hundreds of incandescent lights. These will be superseded shortly by searchlight projectors located on the circumference of the basin.

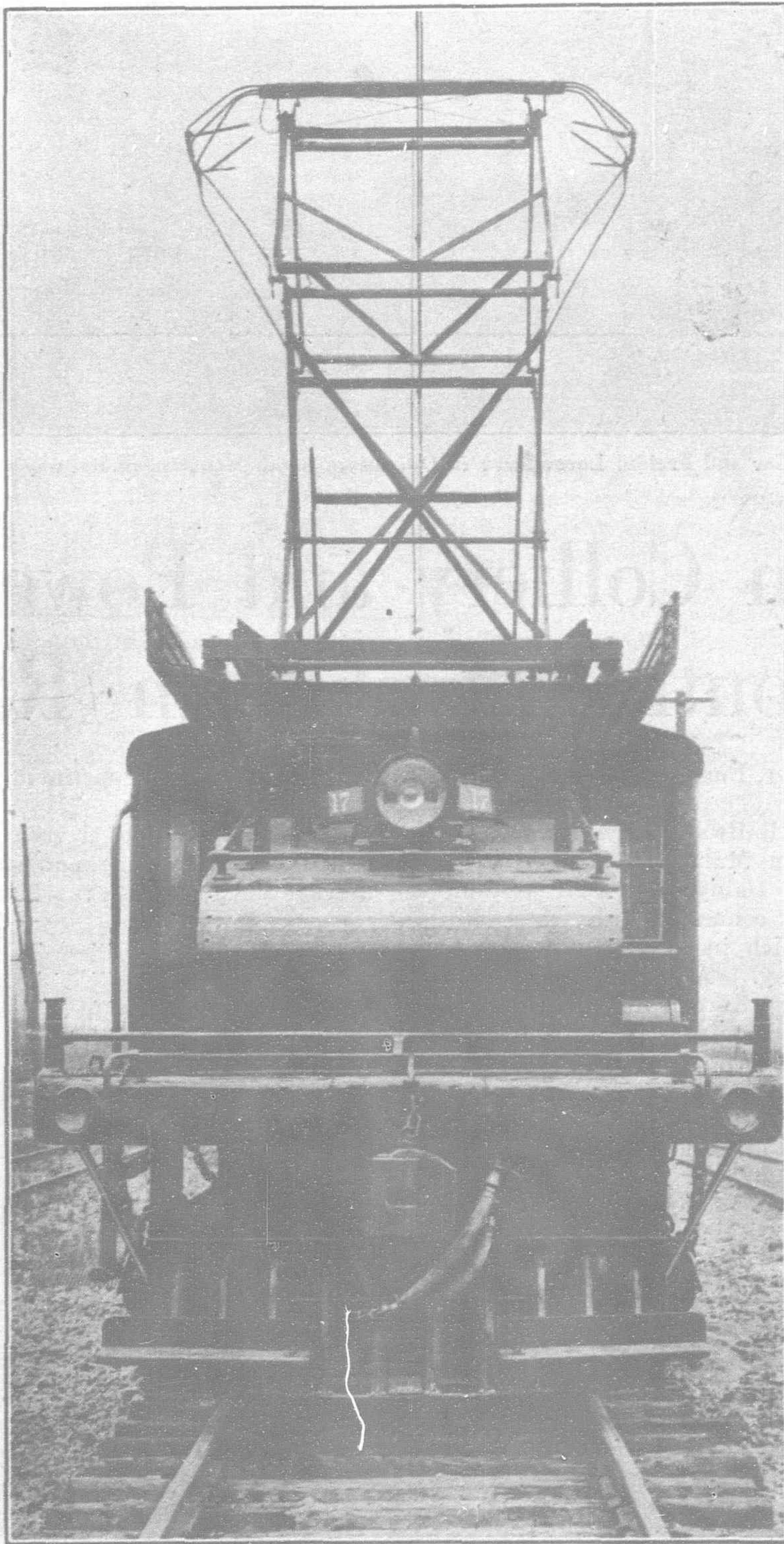
The mine is equipped with seven motor-driven turbine pumps and two motor-driven haulage machines. Excavation of the top-soil and shale is done by means of steam shovels and the waste material used for sand flushing in the existing shafts and pits. One-half ton tubs are used in removing the coal. After the addition of two 300-h.p. haulage machines and two motor-driven pumps, the output of this mine is expected to reach 2,000 tons per day.

The arrangement at the Oyama and Togo pits is similar, each being provided with two brick-lined shafts about 1,234 ft. deep. The inside diameter for the down-cast is 21 ft. and for the up-cast is 18 ft. Single-deck cages, having a capacity of four tubs and two tubs respectively, are operated at present by means of Corliss winding engines. The tubs have a capacity of 20.3 cu. ft. and are operated on 24-in. gauge tracks. Along the inclines to the shafts the tubs are moved by single-haulage gear manufactured in the colliery's own workshops and driven by three-phase motors having special enclosing covers for operating in the explosive atmosphere. Each pit is equipped with eight haulage machines of 5- to 150-h.p. capacity. On equipments larger than 50 h.p. the regenerative system is adopted, the motors operating as synchronous generators and returning power to the line when lowering the empty tubs to the lower workings. This is claimed to be the first extensive use of this system in mine haulage.

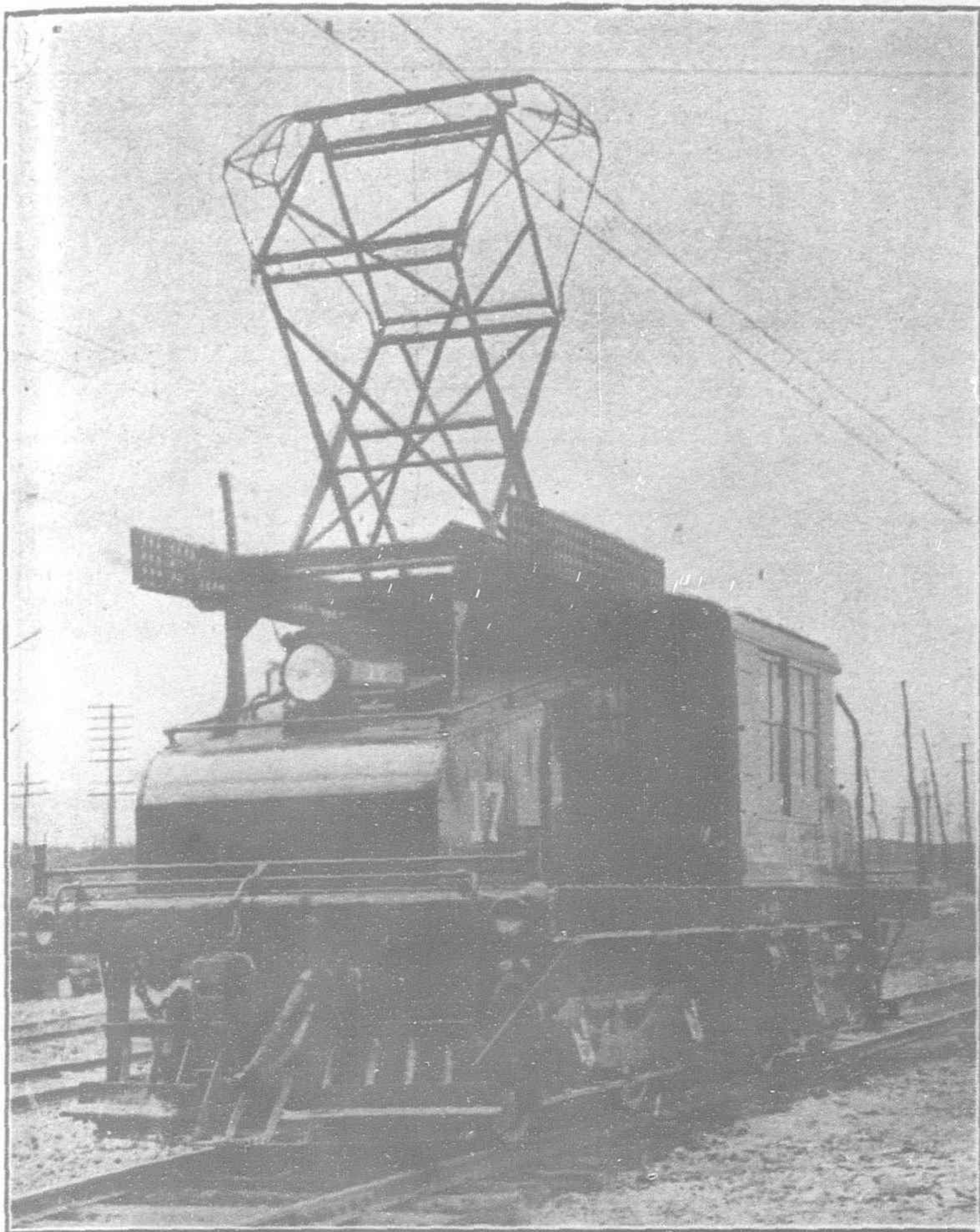
The screening plant is electrically operated and has a capacity of 510 tons of coal per hour. Coal from the screens drop on conveyors, and the slate and dirt is removed by coolies. At the end of the conveyors the screened and dressed coal is loaded into railroad cars by deflecting loading jibs.

Each mine is provided with engine-driven ventilators, and a pumping station located near the bottom of the shaft is equipped with high-lift turbine pumps driven by high-speed three-phase induction motors. Mine operations are to be extended by the addition of two 900-h.p., two 550-h.p., and five 460-h.p., induction motors. The two larger sizes run at 1,200 r.p.m., while the small units run at 1,800 r.p.m. The motors are directly connected to turbine pumps.

The colliery railway with a total length of 43 miles is the



1,200 Volt Locomotive, South Manchurian Railway



1,200 Volt Locomotive, South Manchurian Railway

first 1,200-volt direct-current system in the Far East and has been in successful operation since 1914. The overhead construction is of the 5-point catenary suspension type with a pole spacing of 150 ft., angle-iron lattice poles being used. The trolley wire is of No. 0000 B. & S. grooved copper. The automatic block signal system is employed.

The rolling stock consists of a total of eight electric locomotives, three of which are 45-ton units, each equipped with four 100-h.p. motors and capable of handling 400 tons on a level tangent track. For passenger service, a number of 36-ton cars are included, each equipped with Type M control and air brakes.

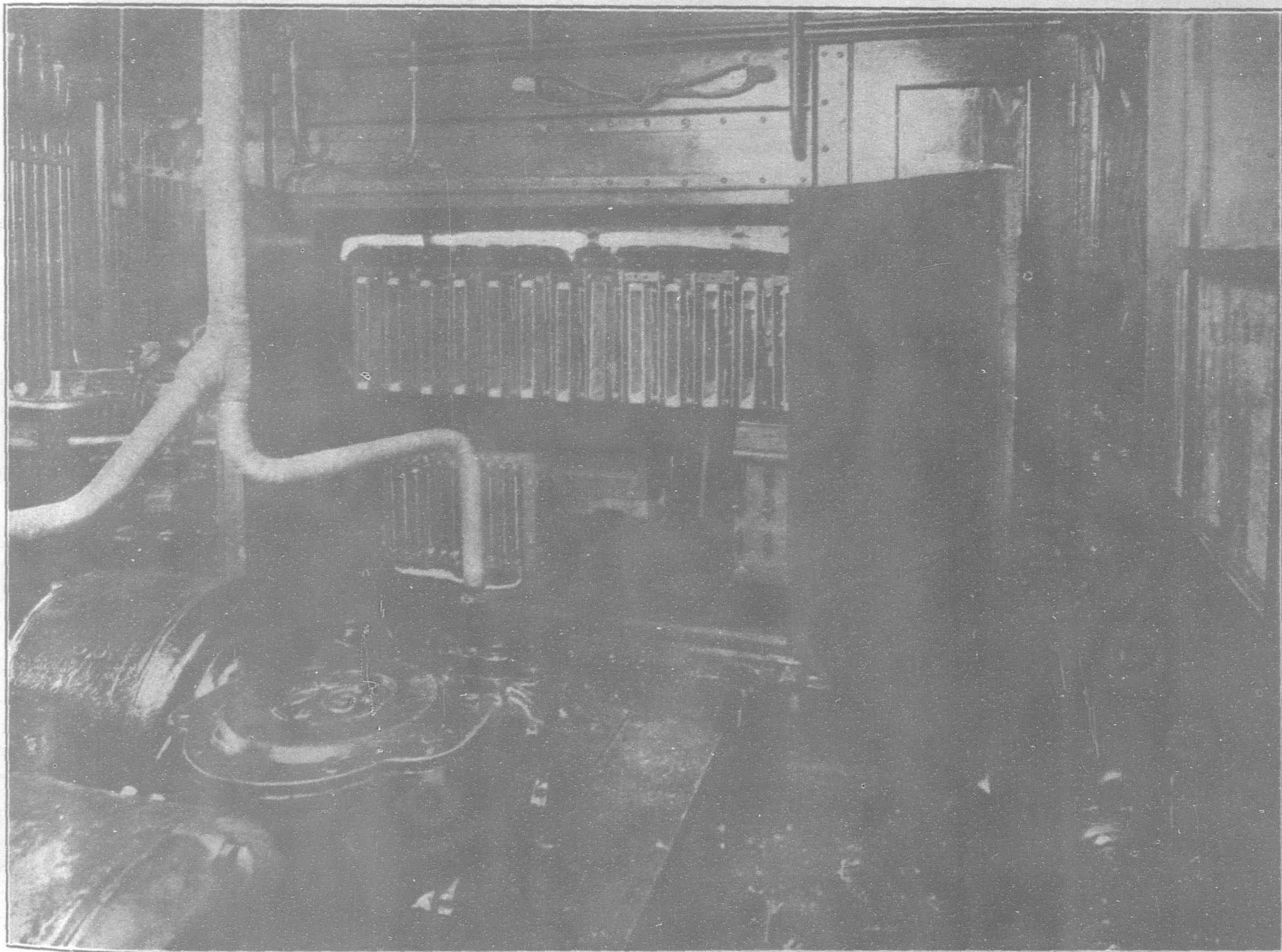
Power for the railway is obtained from three 400-kw. synchronous motor-generator sets converting three-phase 60-cycle current at 2,200 volts to 1,200 volts direct current. These sets are located in power station No. 2 and an extension of one 750-kw. set is to be installed.

Electric light is provided by 17,000 lamps, consuming nearly 450 kw. Three thousand of these are located in the various pits and the others are used for office, workshop, hospital and town lighting.

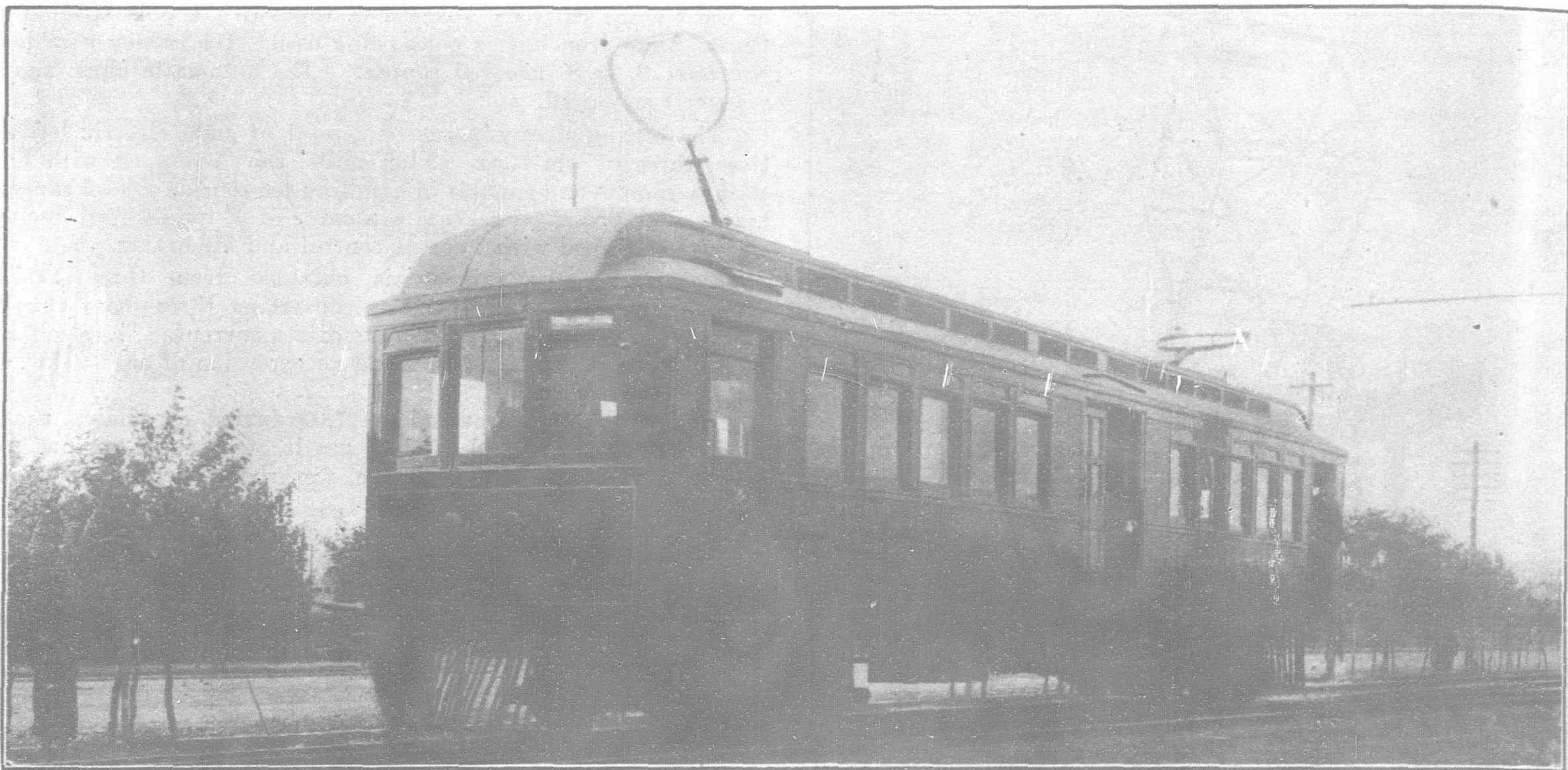
The plant is provided with a machine shop, blacksmith shop, foundry, and carpenter shop, in which a great deal of the apparatus used is manufactured and repaired.

A rescue station and laboratory provides means for all necessary rescue work and chemical analyses. The heat for the engineers', clerks', and foremen's quarters, offices, school, library, etc., is furnished by a central heating station.

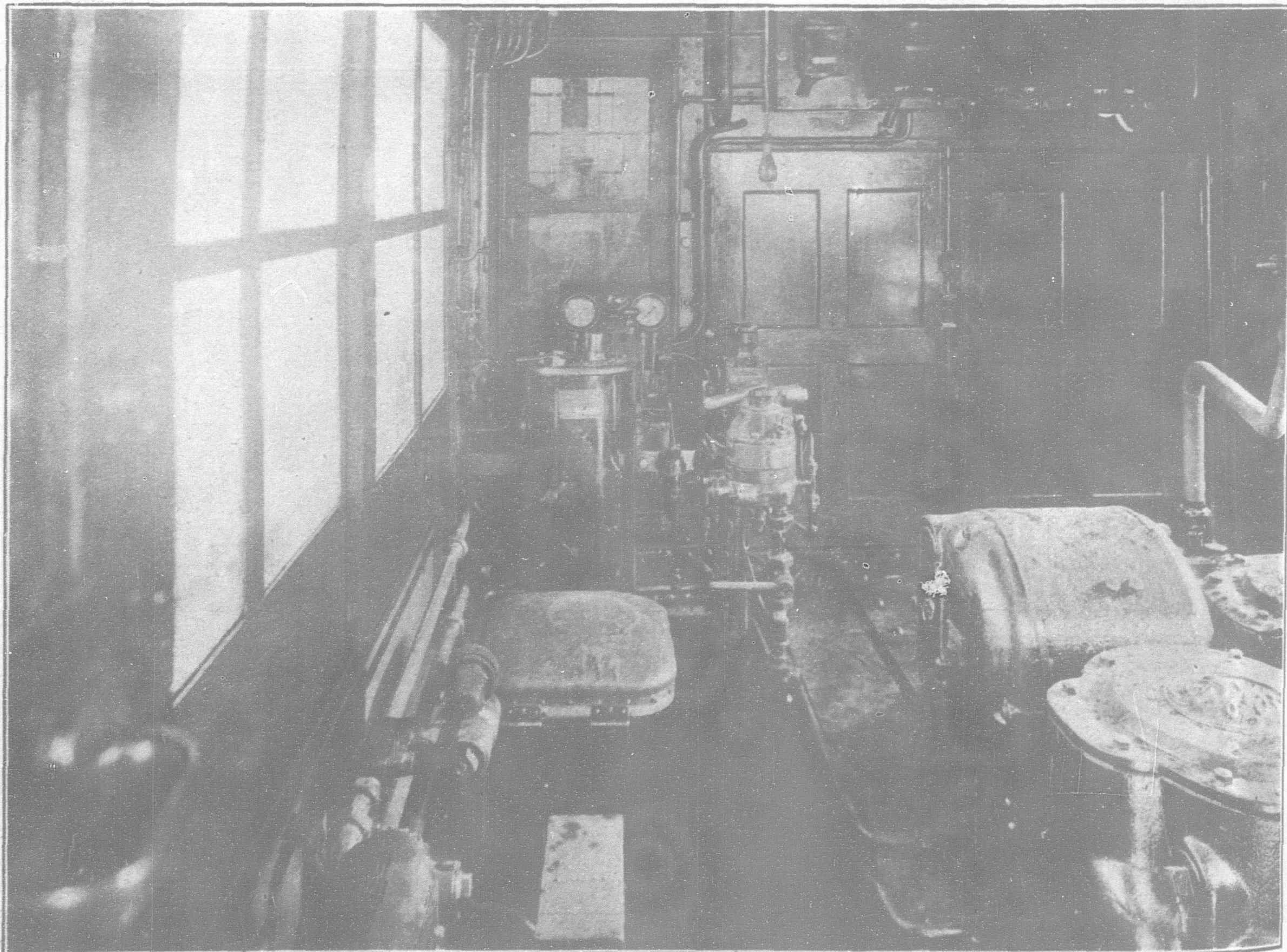
The plant is also provided with a brick factory having a capacity of 20,000 bricks per day. A gas works supplies gas to all houses for cooking purposes; and a sulphuric acid plant produces 48 tons of chamber acid per day. The acid plant's output is employed in the manufacture of ammonium sulphate by the Mond recovery plant, as well as in the electro-chemical industry mentioned. Coal from this district is shipped throughout the Far East.



No. 1 End of Main Cab, 1,200 Volt Locomotive



35-ton 1,200 volt Passenger Motor Car, equipped with two General Electric Co.'s 205-1,200 volt Motors, South Manchurian Railway



No. 2 end of Main Cab, 1,200 volt Locomotive

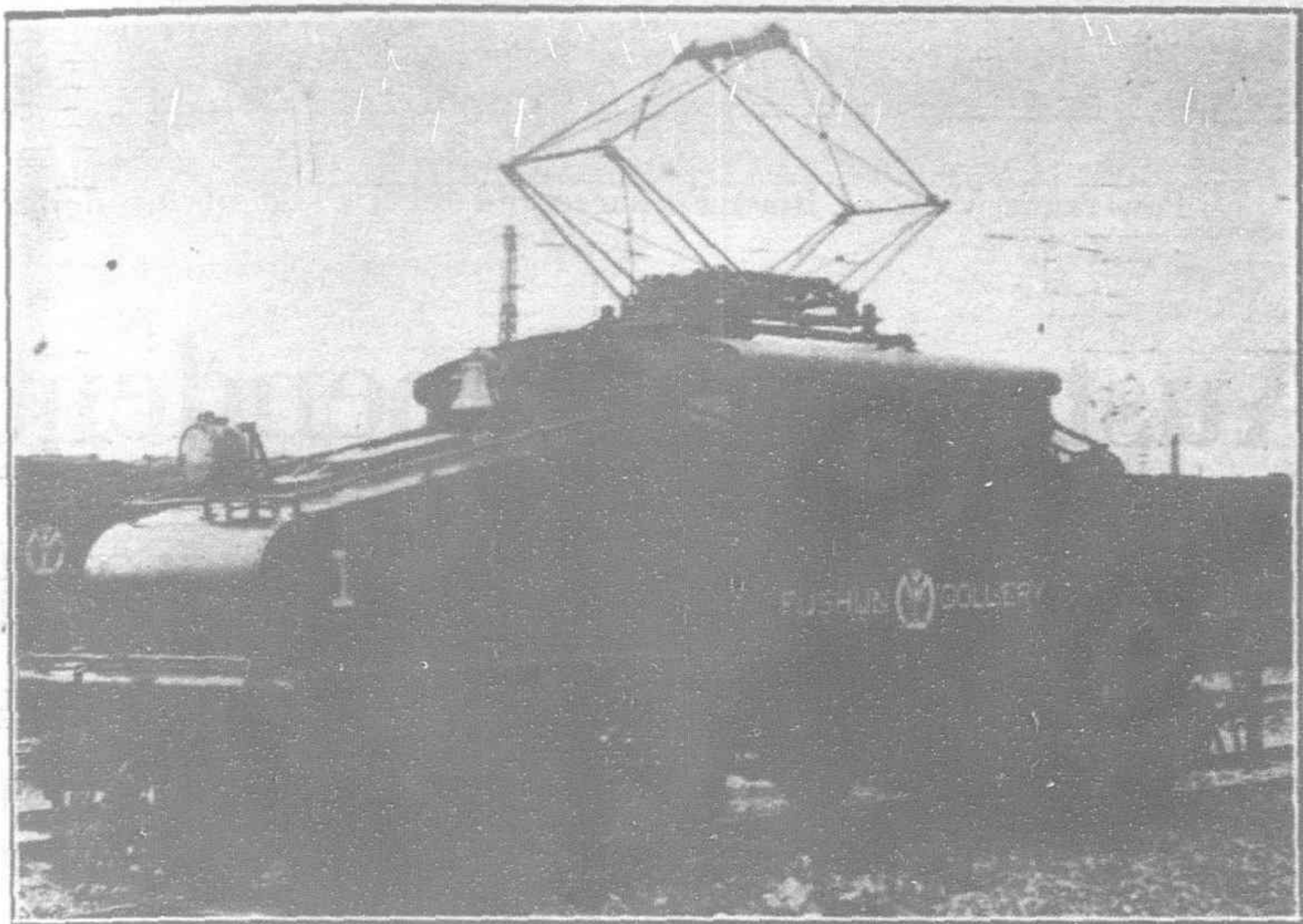
Japanese Electric Railway Developments

Many important electric railway developments are now proceeding in Japan. The following is a summary of the principal projects:—

The underground railway project of the Musashi Electric Company, which has received the sanction of the authorities, will be commenced at once in order to open traffic on the Nakashibuya-Hibiya line in 1923. A surface line will extend 15 miles between Nakashibuya and Yokohama, and will be completed in 1922.

there are but 11 stations on the route. The old line has more than 30 stations. The present terminus of the new line is at Kumohi, in the eastern part of Kobe, but as soon as an official charter is granted the intention is to extend as far as Kanomachi.

The Chichibu Railway Company will extend its electric railway line by 4.70 miles between Shirakawamura and Kagemori-mura, Chichibu-gun, Saitama prefecture.

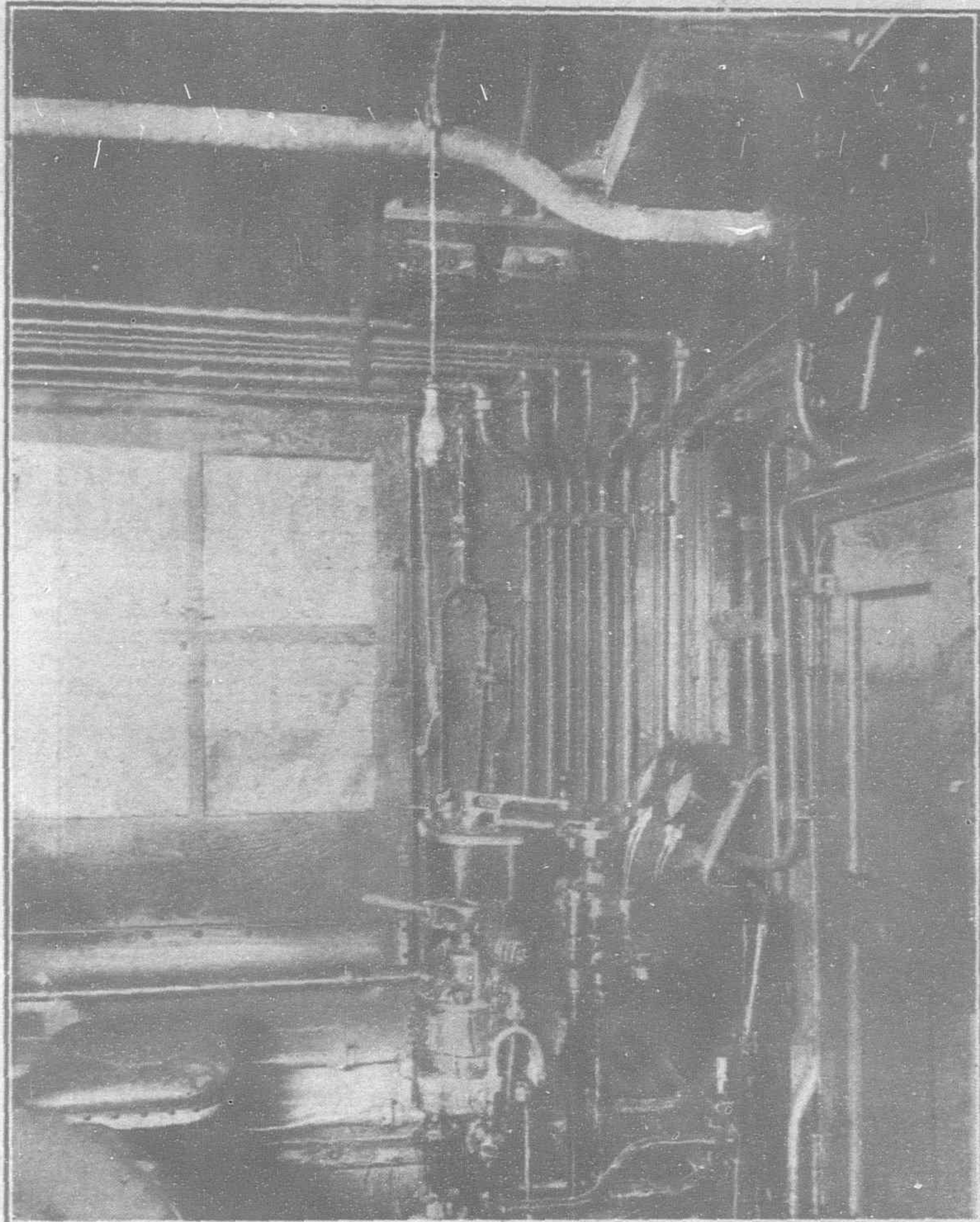


40-ton 1,200 volt Freight Locomotive, equipped with Type M control and General Electric 206-600 volt Motors, at work on the Fushun Colliery Line

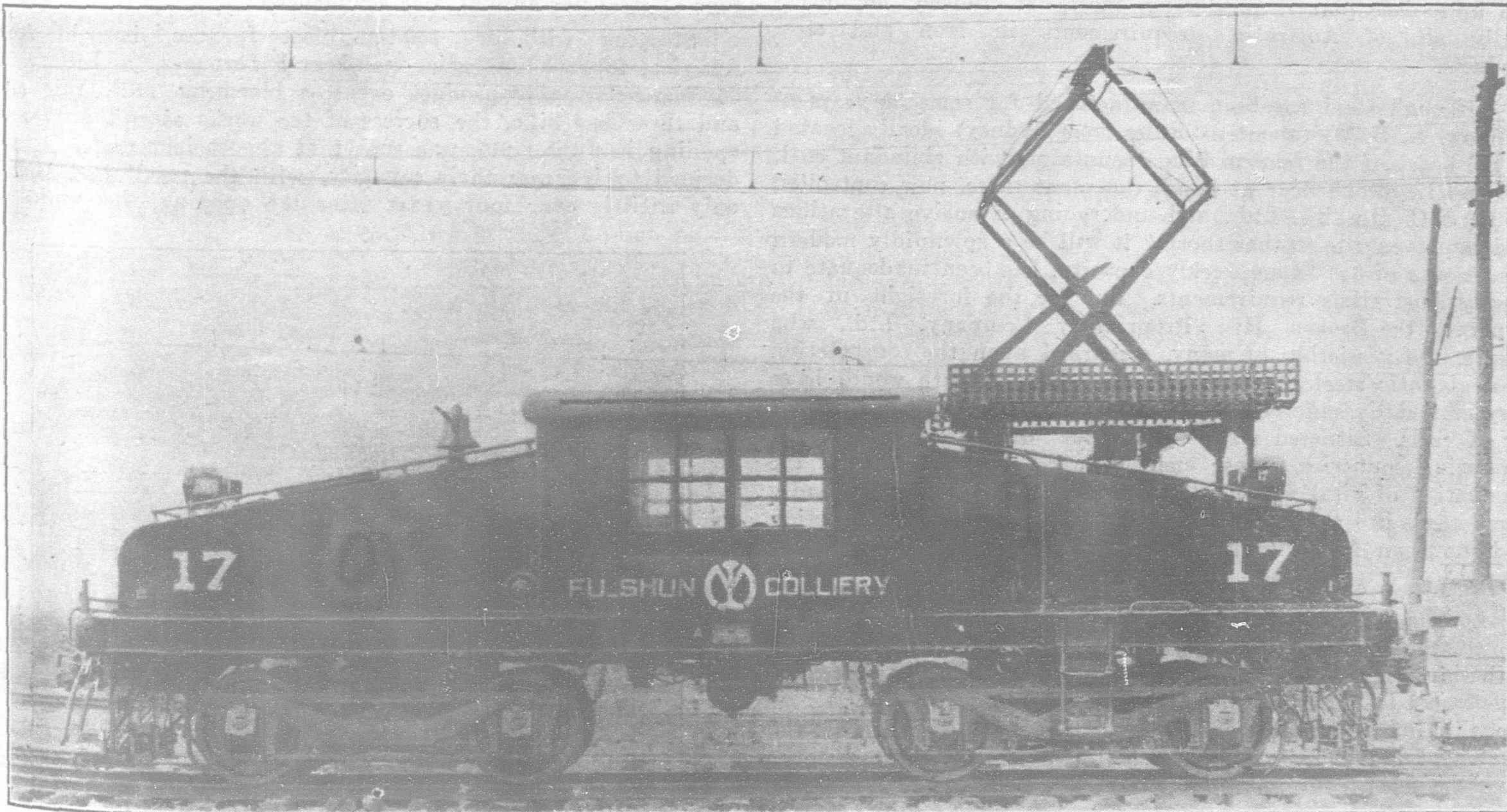
Extensions of the electric railways running out of Tokyo which will link many important centres with the capital are now planned by the railway department.

A decision has already been reached to run an electric line from Ryogoku to Chiba and from Kichioji to Hachioji. Another extension under consideration is that of the present Tokyo-Yokohama electric line to Odawara and Yokosuka. A new electric line out of Ueno station to Takasaki is also planned.

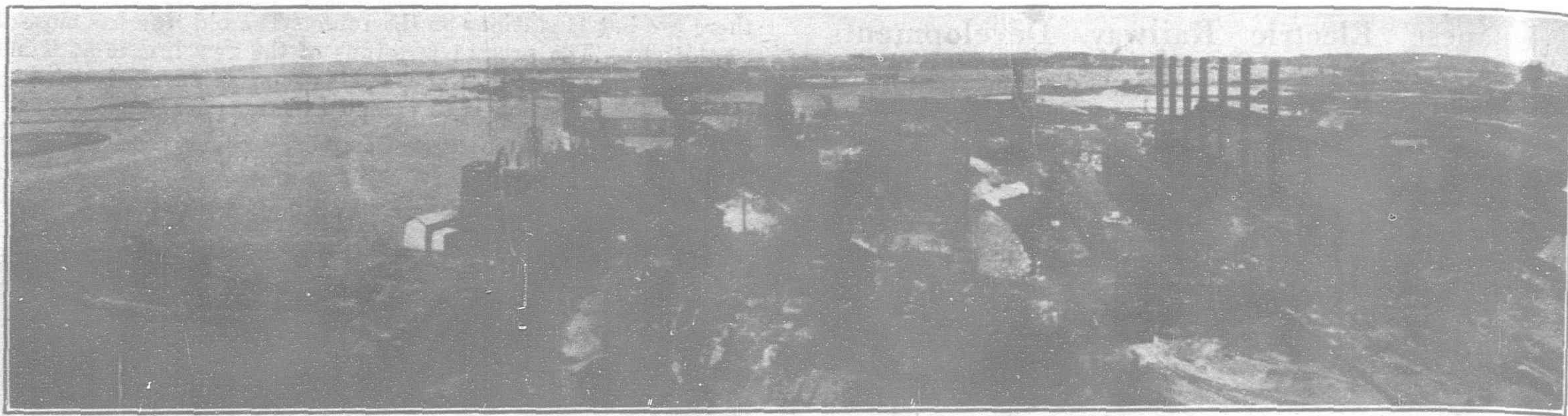
The new electric railway between Kobe and Osaka, recently opened, is intended primarily for through passenger traffic and



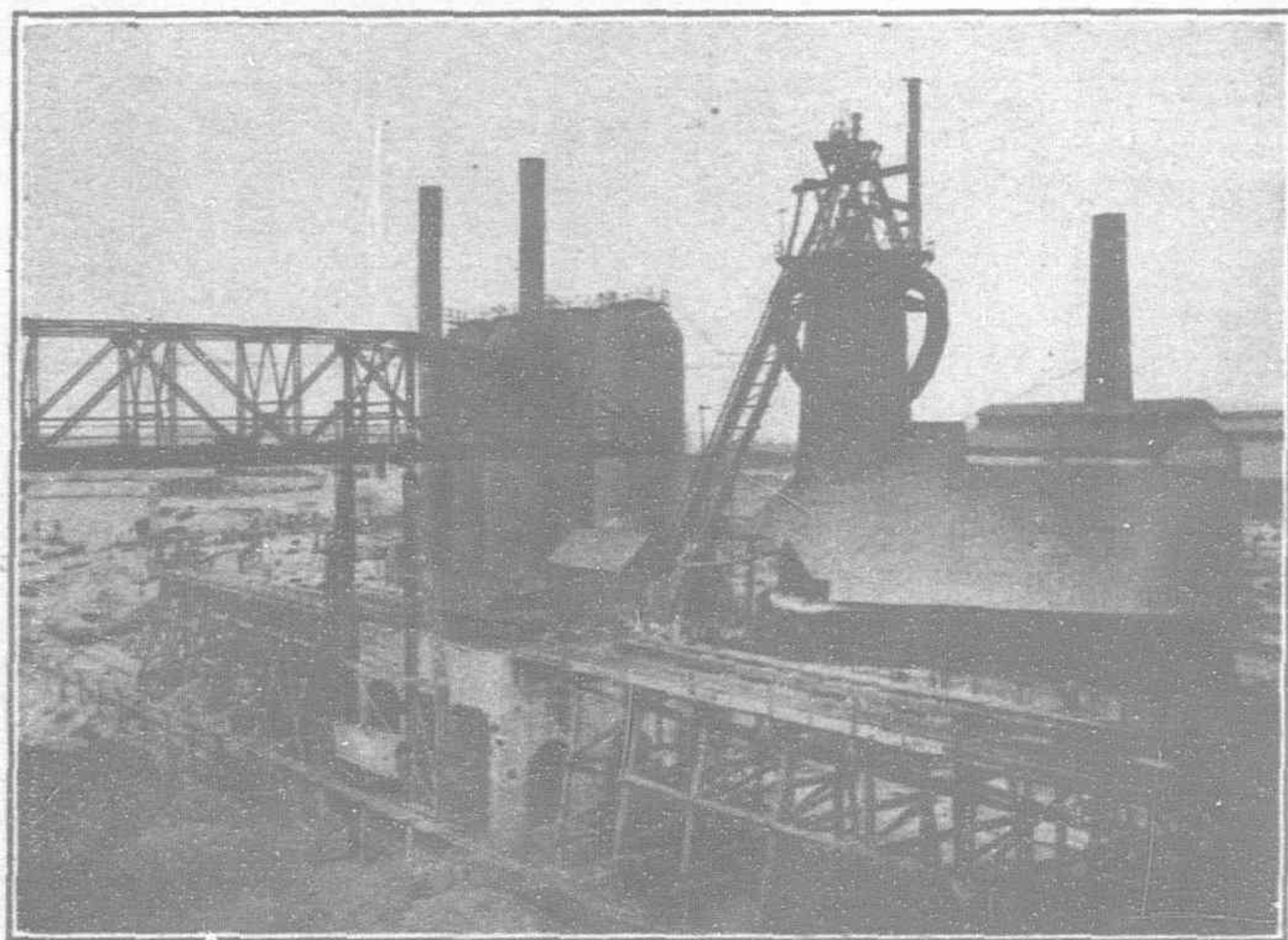
Control Apparatus, 1,200 volt Locomotive in operation at Fushun Colliery



1,200-volt General Electric Co.'s Locomotive in operation at Fushun Colliery



Panoramic View of Blast Furnaces and Steel Plant of the Broken



View of No. 1, 350-ton Blast Furnace

THE realization that next to food and clothes nothing is more necessary to the needs and well-being of a progressive nation than an adequate supply of iron and steel has taken firm root in the commonwealth of Australia, where, when present improvements and additions are completed, there will be two up-to-date plants producing most, if indeed not eventually all, of Australia's requirements in iron and steel products.

Although steel has been manufactured for some 30 years at Lithgow, N. S. W. (about 100 miles from Sydney) ideally located in the heart of the famous Blue Mountains, with abundant coal, ore and limestone near at hand, the plant there, now controlled by G. & C. Hoskins, Ltd., and undergoing extensive alterations and improvements so that shortly it will be a splendidly modern steel works of 3,000 tons weekly capacity, has been inadequate to supply Australia's requirements. But for the foresight of the owners of the Broken Hill Proprietary Company, Ltd., who despite the pessimism of many, embarked upon the construction of a gigantic steel plant in 1913 the commonwealth would have very materially suffered during the war, particularly in the matter of rails. Situated many thousands of miles from steel producing countries, whose energies were concentrated on the production of vital war needs, Australia would have been badly hampered in the carrying on of necessary construction had she been forced to rely on steel from former sources of supply.

Long a factor in the development of the continent's mineral wealth, the Broken Hill Company had acquired, in connection with its smelting operations at Fort Pirie, South Australia, whence the lead from its mines at Broken Hill, S. A., is brought, large deposits of iron hematite ore. These deposits, located at Iron Knob, South Australia, are but a short distance from the coast, convenient for water shipment and besides being

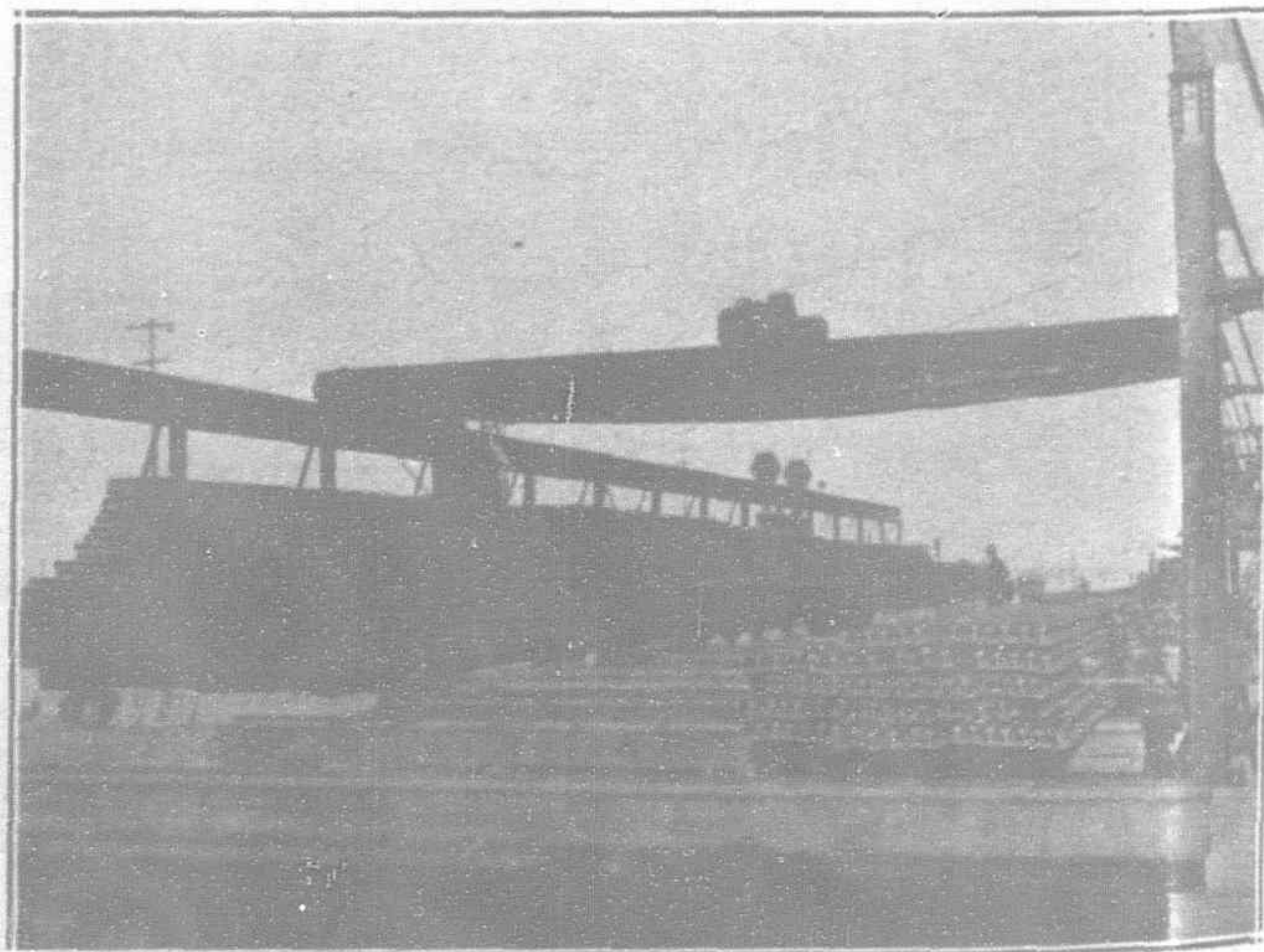
Australia Independent Natural Resources

Broken Hill Proprietary Company's
Originally Patterned After American
Necessary Iron and Steel and

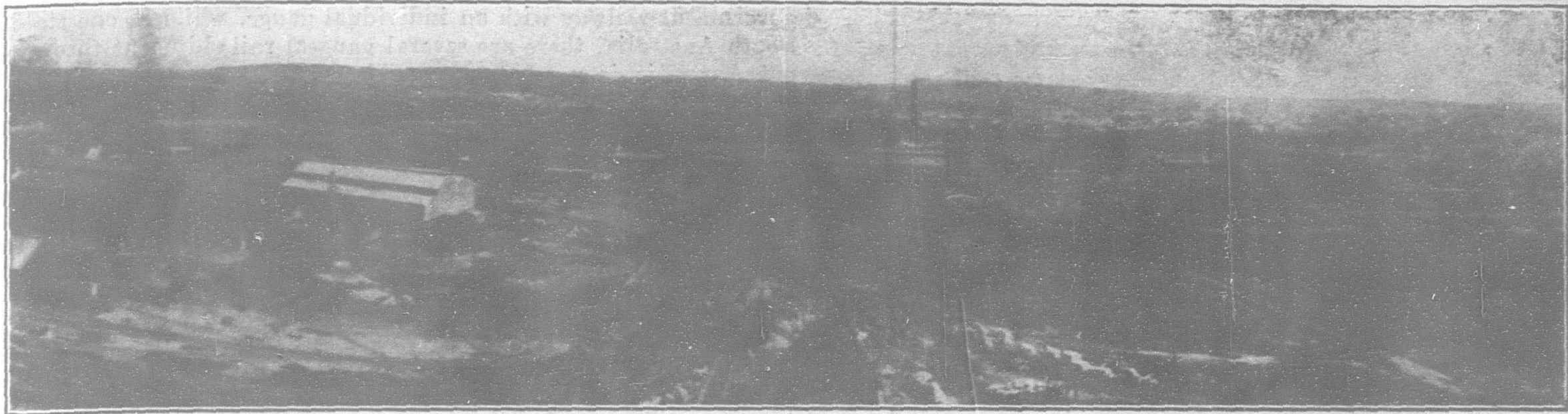
apparently inexhaustible, are exceedingly rich, yielding on an average 66 per cent. of metallic iron. So, that with the acquiring of large quantities of limestone at Devonport, Tasmania, also near seaboard, two of the primary requisites were at hand.

Having as early as 1890 acquired an extensive site at Newcastle, in the heart of Australia's richest coal region, which as time goes on bids fair to outrival its famous prototype of the mother country, it was decided to bring the ore to the coal, as was done in Pittsburgh years before, and accordingly in January, 1913, under the direction of David Baker, formerly of the firm of Ladd & Baker, Consulting Engineers, Philadelphia, Pa., construction of a steel works, with an initial capacity of 120,000 tons of steel per annum, was commenced.

Starting with one 350-ton blast furnace, brought from America, four 65-ton basic open-hearth furnaces, a battery of 66 Semet-Solvay by-product ovens, a blooming mill, rail mill and three bar mills, the success of the works after their formal opening in June, 1915, was such that almost immediately it was decided to increase their capacity, with the result that to-day, only a little over four years after the opening, the works at



Rail Stock Yard



Hill Proprietary Company's Plant at New Castle, N. S. W., Australia

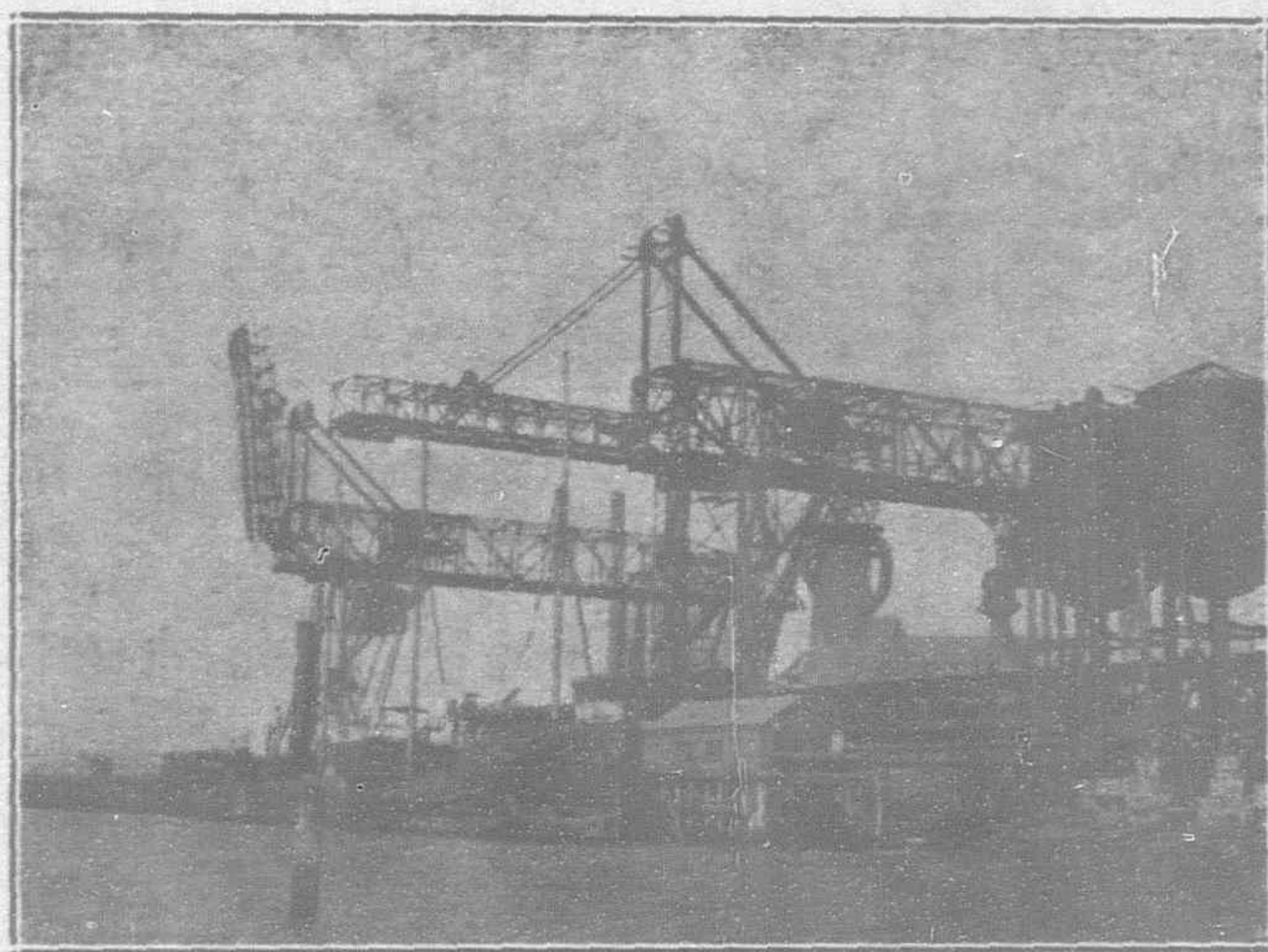
Steel Nation Due to and Modern Mills

**Blast Furnaces and Steel Plant
Practice Supply Australia With
Semi-Finished Steel Products.**

Newcastle are producing 5,000 tons weekly, in which amount is included sufficient rail tonnage to take care of the entire requirements of Australia's five states.

Although much of the original equipment of the works was brought from America, from which country also the latest practice has been inaugurated, under the direction of Mr. Baker and several American assistants, the additional 350-ton furnace, which was blown in late in 1918, as well as a 100-ton furnace, now running on ferro-manganese, have been entirely built at the Newcastle works. A Morgan Construction Company continuous rod mill, with 16 pairs of rolls, has also been installed, and has been in operation since late in 1918.

Situated on the Hunter river, at a point called Port Waratah, about 1½ miles from Newcastle, the site of the present works was originally a swamp and the present ground reclaimed by sand dredges, practically all of the buildings, as well as foundations for the heavy machinery being erected on piles as well as concrete bases. Most of the land was then under water. The bank was marked by a ridge of mud, within which water oozed and fell according to the state of the tide. In order to drive the first pile for the foundations of the blast furnace, a punt with a pile



View of Wharf Showing Ore Bridges

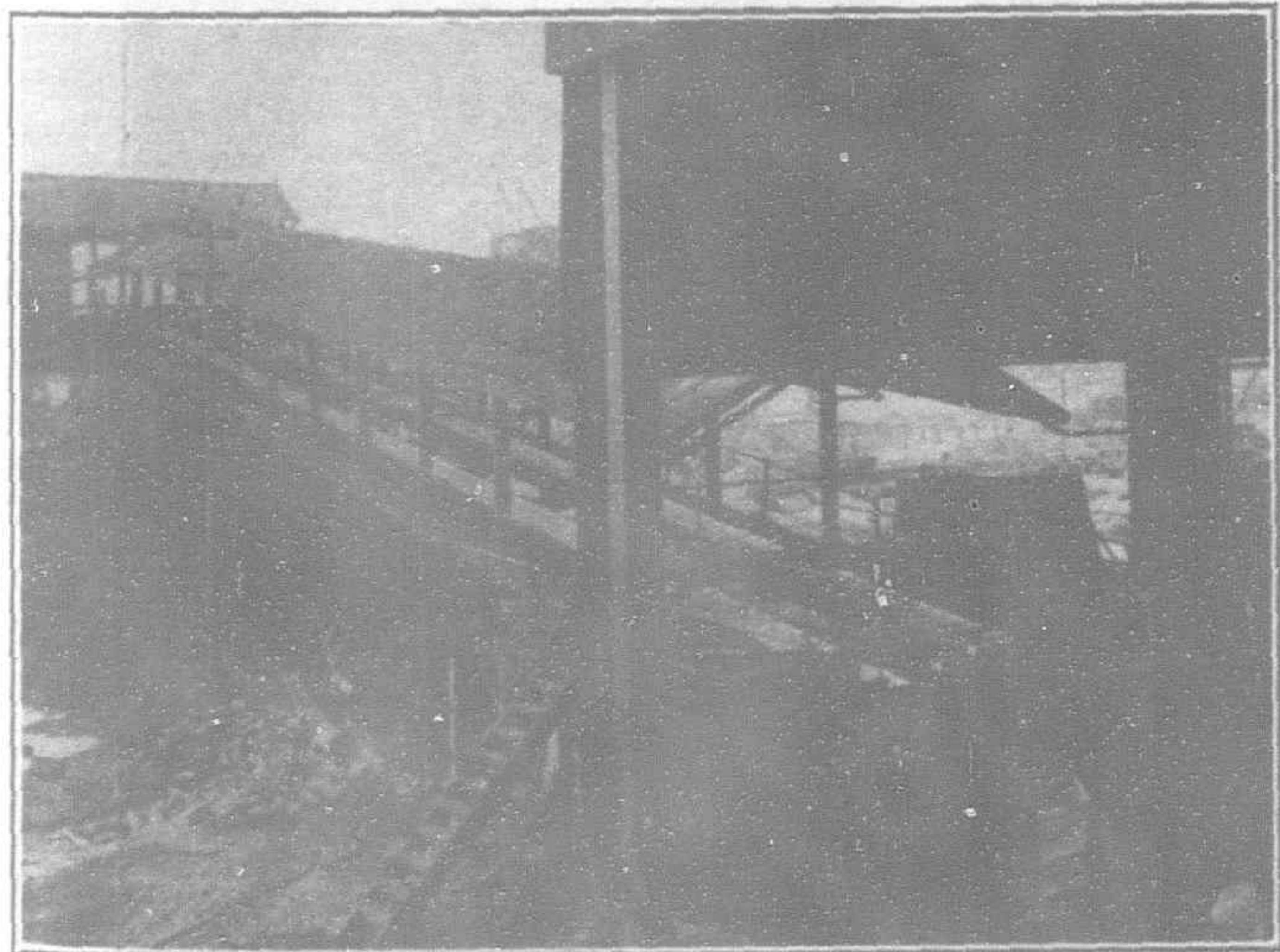
driver and engine was floated to the site of the blast furnace, and from that punt the piles were driven, the first one going down to a depth of 31 feet 5 inches. The water here was about 2 feet 6 inches deep. Piling proceeded steadily, the ultimate location of the blast furnace being underpinned with 225 piles in 15 rows of 15 each.

Were the heating stoves are erected nine rows of 38 piles were put down. Everywhere at which it was intended to build heavy structures the foundation was raised on piles.

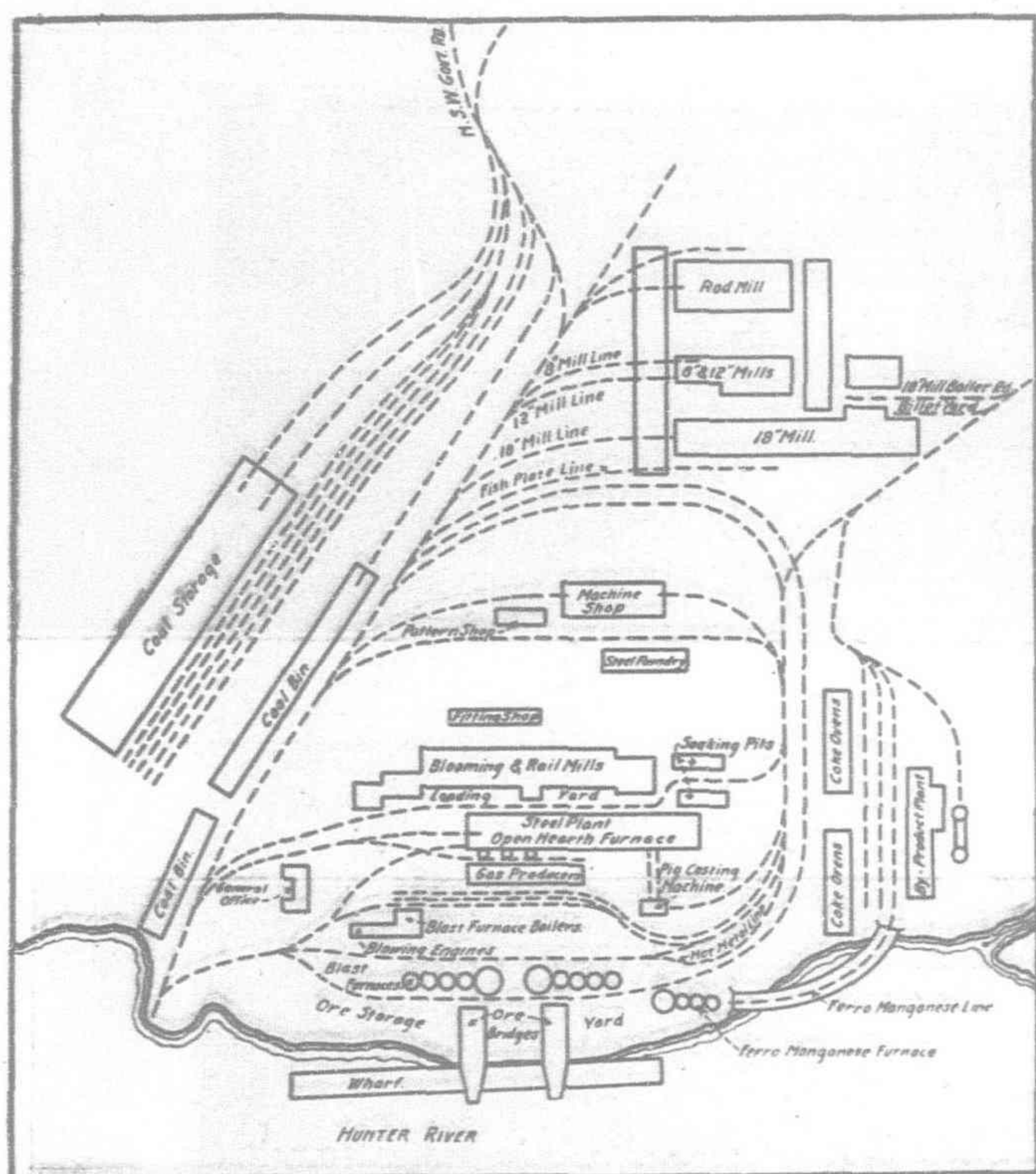
For instance, the foundation of the blast furnace, begun in the early part of May, 1913, is a concrete block 44 feet square and 17 feet thick; the stove foundations are 132 feet long, 29 feet wide and 15 feet thick. The engine that runs the blooming mill is laid on a concrete mass measuring 3,000 cubic yards; the engine for the rail mill is similarly buttressed, while the remarkable steadiness of the building holding the machinery working the blowers, notwithstanding the huge horse power developed, is due to the solidity of the base on which the engines are reared.

The Hunter river has been dredged to a depth of 35 feet, so that ocean-going vessels, bringing in the ore and limestone from the neighbouring states of the commonwealth, are enabled to proceed directly to the huge 1,300 foot wharf, which is served by two giant ore bridges, 240 feet long, 60 feet high and equipped with a movable arm 82 feet long, unload their cargo, and reload with coal for the Fort Pirie smelters and for Tasmania at the adjacent coal storage wharf, where a coal bin capable of holding 5,000 tons of coal has been constructed.

The works have been very efficiently laid out, modeled somewhat on the lines of the Steel Corporation plant at Gary, and all materials is moved in regular progression from the time the ore and limestone is unloaded at the wharf until the finished steel is either placed in the steel storage yard or loaded aboard



Pig Casting Machine for Taking Care of Overplus Iron



Layout of Broken Hill Proprietary Company's Blast Furnaces and Steel Plant.

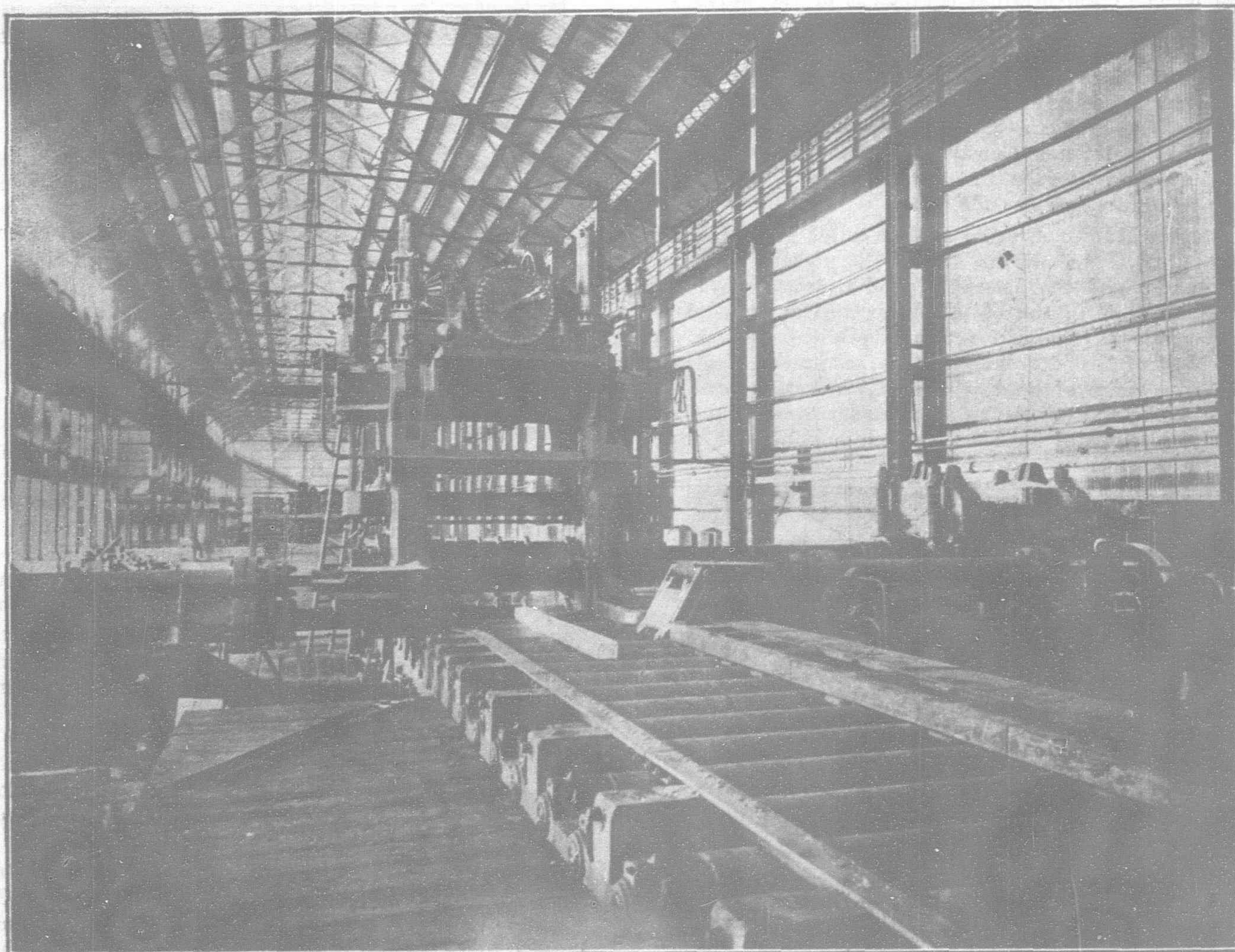
cars ready for its journey to supply the requirements of N. S. W. customers, or in steamers if destined for the other states of the commonwealth. Due to the lack of standard gauge existing on

the various railroads of the continent (each state has its own government railway with an individual gauge, while in one state, South Australia, there are several gauges) rail shipment throughout Australia is not as yet possible.

The works might be quadrupled in size, and they would continue in the same orderly association from the wharves inward, without crowding, and using the same sources of transport, fuel and ore supply—all working with the utmost economy, and by a system of mutual interchange, achieving the highest efficiency at a minimum expenditure of power and labor.

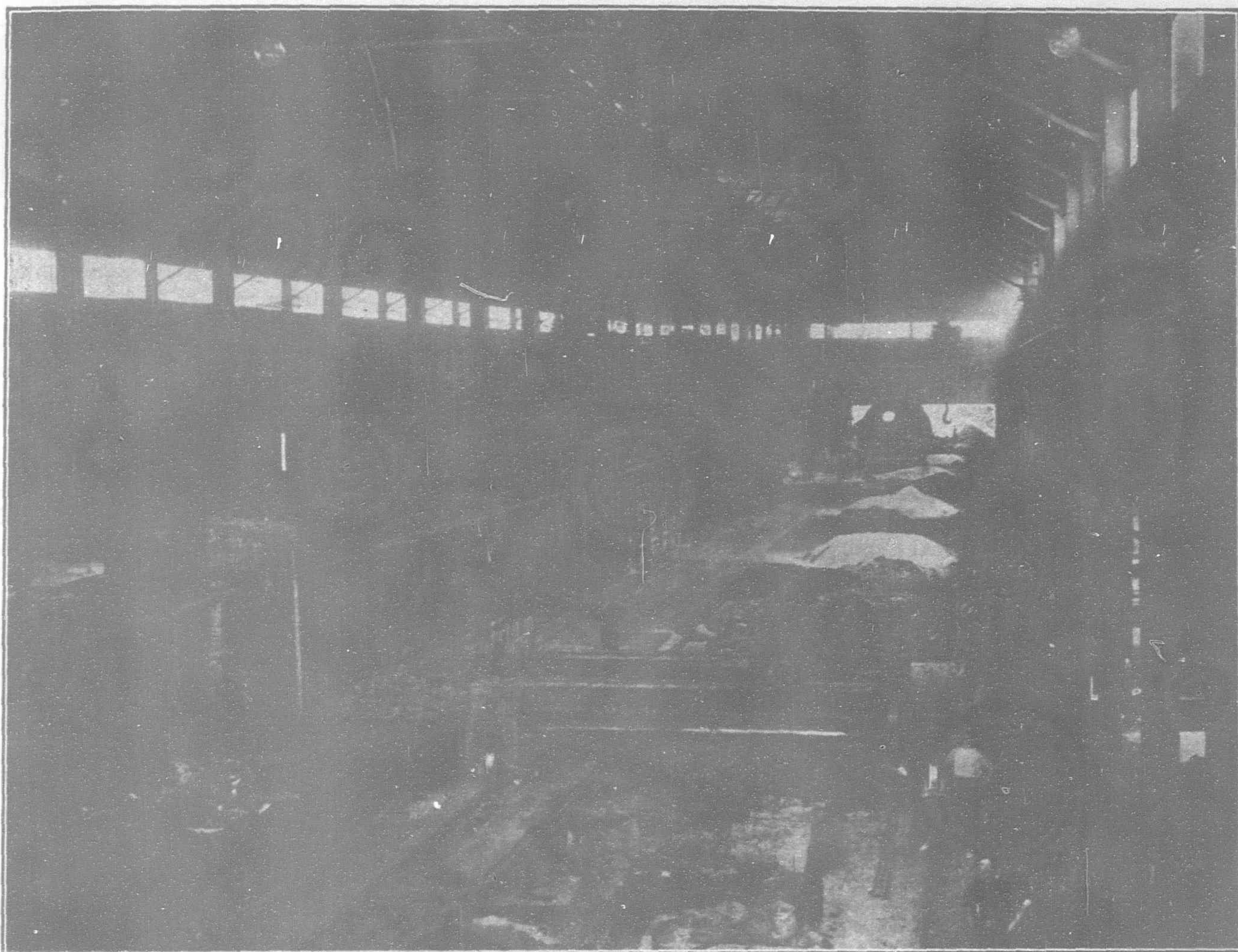
The illustrations show the works as they appeared in 1915 with the exception of new blast furnaces shown in layout. Once the ore is unloaded by the ore bridges into the ore storage yard the blast furnace burden is assembled, conveyed to the blast furnaces, which are equipped with Baker-Newman rotary distributing tops (Mr. Baker is joint designer of this top) by inclined skips, and the hot metal, after each tapping proceeds on its way along the hot metal track, either directly to the open hearth furnaces (seven of 65 tons capacity) or to the pig casting machine. The open-hearth furnaces are served by an Alliance charger. Ore bins have capacity of 27,000 tons. Gas for open hearth furnaces is made in six Morgan (new type) gas producers. Ingots, measuring 20 by 22 inches are given 16 or 17 passes through the blooming mill, until an 8 by 8 inch bloom is produced, then (if intended for bar or rod mills) cut under 42-inch hot metal saw, and conveyed to the 18-inch mill. The blooming and rail mill building is 950 feet long by 75 feet wide. The rail mill is a 28-inch mill. There are three soaking pits, each capable of holding 24 ingots.

There are 132 Semet-Solvay type coke ovens producing five tons of coke from a charge of seven tons of coal every 22 hours, or a daily capacity of approximately 660 tons.—*The Blast Furnace and Steel Plant.*



Thirty-five-inch Blooming Mill Driven by 42 x 60 Twin Cylinder Reversing Engine

AMERICAN STEEL PLANT IN AUSTRALIA



View of Open Hearth Plant showing Seven Open Hearth Furnaces

Australia to Have Big Fuel Oil Station

According to a despatch to the London "Times" from Sydney several Australian shipping firms are completing a scheme for a huge coal and oil bunkering depot in Sydney, designed to be the best in the world in the rapid supply of fuel to ships. A million sterling has already been spent for machinery which is capable of putting on ships 1,400 tons of coal an hour.

Steps are also being taken to convert most of the Australian passenger steamships into oil burners. Foreseeing a greater demand for oil the Anglo-Persian Oil Company is seeking permission to lay pipes to the chief wharves of the Australian State capitals. The States are complying with the request, and it is expected that the Anglo-Persian company will replace the American corporations which supply Australia at present.

Meanwhile experts engaged by the Anglo-Persian company are very busy seeking oil in Papua, and it is understood that the commonwealth is transferring the control of search to the company, and is also entering in commercial relations with it similar to those enjoyed by Britain.

It is reported that an Australian syndicate has invented a new vegetable substitute for petrol derived from molasses, which is said to be equal in power and only half the cost of the petrol now used.

Australian Goods in China

Steady efforts are being made to increase Australia's trade with the Far East and shipping is following hard in the wake of a larger commercial intercourse, says the Sydney correspondent of "The Times."

The boycotting of Japanese goods by the Chinese has given Australian manufactures an opening in that giant Republic. Government trade agents in the East report splendid potentialities.

Six months ago the China-Australia mail line was formed. The owners purchased an old but sound vessel from Messrs. Huddart, Parker & Co., and set out to secure customers north and south of the Equator. Since then the company has been searching for additional vessels, and recently acquired the *Victoria*. It has now purchased the *Hwah Ping*, formerly an Austrian passenger ship named *Bohemia*, which the Chinese Government seized and interned on the outbreak of war. She is of 4,284 tons burden and is considered well adapted for the trade.

Inquiry at the company's offices reveals that there is abundant cargo offering to keep the three ships very busily employed, and as it is understood that the exchange of commodities has not yet gone beyond the coastal cities of China, and the enormous markets of the interior have still to be penetrated, the prospects of a lucrative growth of trade appear to be very rosy.

CONSTRUCTION

Steel Making in the Far East

To-day, Japan looms as one of the formidable competitors in the struggle for world trade. Through the foresight of her statesmen she is not only approaching a condition where presently she will have a good supply of most essential raw materials, coal and iron ore, but her manufacturing facilities, consisting of large shipyards, machinery and engineering works, electrical establishments, etc., have been improved and increased to a point where, before very long, Japan will be independent as regards providing in these lines for her own needs, and will be enabled to build for export. In a country where manufacturing of all kinds has been carried on almost exclusively in the homes of the workman, and the introduction of the factory system of production is of comparatively recent origin, it is surprising how rapid has been Japan's progress. Works like the Anzan Steel plant at Anshanchan, Manchuria, owned by the South Manchuria Railway Company, a Japanese enterprise, have been built entirely in the railway company's model shops at Shahoka (where there is located a model colony that would do credit to any establishment in America) and while it is expected that the steel works machinery, open hearth furnaces, plate and structural mills, etc., will be purchased from England or America, this is only because the Japanese shops are not as yet accustomed to design equipment of this nature expeditiously. That they can build machinery of this character however, is proven in the installation of the steel plant at the Mitsubishi Steel Works at Kenjiho, Chosen, where except for the two 150-ton blast furnaces built by Riter-Conley Company, Pittsburgh, eight McClure hot blast stoves, Wilputte battery of 50 coke ovens, six German gas producers, three Ingersoll-Rand turbo blowers and General Electric generators, the entire steel mill equipment, consisting of two 50-ton open-hearth furnaces, a 58-inch plate mill, structural mills and blooming mills and entire crane equipment, housed in a magnificent concrete building, is built by the Shibaura Engineering Works, Tokyo. This plant has just started to produce steel and will for the present only smelt about 50 per cent. of its pig-iron capacity. It is expected that within a short period, despite the fact that it was built during war times and at war prices, it will produce iron and steel as economically as the big government plant at Yawata, to which it is next in size.

From the standpoint of exporting goods, except raw materials, Japan cannot be figured upon as a big possibility, but with cheap labor and better production facilities, Japan will be a tremendous import market, particularly when the Japanese learn how to turn out higher-grade merchandise in larger quantities. Progress in this respect is being continually made.

In the following paragraphs some information concerning the Hang-yeh-ping Iron and Coal Co., Ltd., and the Anzan Steel Works is given.

Anzan Steel Works

On May 1, 1919, the new works of the Anzan Steel Works commenced operation.

The Anzan Steel Works was conceived and planned by Lieut.-General Baron Y. Nakamura, ex-governor-general of Kwantung and ex-president of the South Manchuria Railway Company.

The iron mines of Anzan were made exploitable by virtue of the Sino-Japanese treaty with regard to South Manchuria, concluded in May 1915. A company was organized under Sino-Japanese joint management after the style of the Chenhsing Mining Company. The grand plan of the new works was put in execution in the autumn of 1916. The ultimate plan of the new plant is to turn out 1,000,000 tons of pig iron annually and to manufacture it into steel.

As the work for the first part of the program, two smelting furnaces capable of yielding 150,000 tons of pig iron per annum were to be constructed and equipments were to be installed to manufacture the output into steel.

How the S. M. R. Company came to select Anzan for the seat of the new gigantic plant has been criticized by some people and even the deferment of the building of the first fire in the grate has been made a theme of insinuating remarks. However, all these are only the offspring of superficial observations, and the fact is that the most careful study of the subject was made in deciding the seat of the steel works.

The first requisites for a steel works are water supply and fuel. The success of the enterprise may be considered to depend upon the facilities for obtaining these two requisites. However, with ample facilities for the supply of the two primary requisites, the place must not be damp, or threatened with a flood. From these considerations, the present site of Anzan is excellently suited for the purpose.

In course of time, water supply will have to be drawn all the way from the River Taitzu, 16 miles away, running north of Liaoyang, but to answer the needs of the first part of the program, temporary arrangements have been constructed on the bank of the River Chienshan and also at the foot of Shoushan, famous as the key to the Russian strategic situation in the battle of Liaoyang in 1904. Reservoirs have been constructed at both places for the purpose. An idea of what an important factor water is in iron manufacturing may be had from the fact that for the operation of two smelting furnaces 20 tons of water are required per minute. The necessary water supply for the two furnaces, would be enough for a population of 500,000.

Next, as regards coal, Fushun coal will form the principal part of supply to be mixed with Penchiu coal in a minor portion. For the first part of the program, 400,000 tons of coal will be wanted annually.

When in future the works are ready to put out 1,000,000 tons of pig iron, 2,800,000 tons of coal will be required annually.

Then as to the iron mines, the first mines to be tapped are Yingtaoyuan, Takushan, and Hsi-Anshan out of altogether eight mining zones. Yingtaoyuan produces ore containing from 60 to 65 per cent. iron while the other two give ore containing 40 per cent. iron.

(Blast Furnace and Steel Plant.)

New Steel Plant in India

The development of the iron and steel-producing industry in the Far East has made large strides during the past decade and that this progress is not at a standstill is evidenced by the recent entrance of a new company into the iron-producing field of India, says the "Iron Age." The Indian Iron & Steel Co., Ltd., of Calcutta, India, with Burn & Co. as managing agents, was formed in the early months of 1918, for the purpose of utilizing iron ore and coal properties which had been prospected and acquired. These properties showed such promise that it was decided to build the first unit of a complete steel plant at Asansol, India, a town located on the East India Railway about 120 miles north of Calcutta. This location was chosen on account of its proximity to the coal fields.

Under the managing directorship of G. H. Fairhurst, preliminary work was completed and contracts were entered into for the construction of one complete 350-ton capacity blast furnace together with a 168-oven by-product coke plant. Simon-Carves, Ltd., of England, received the contract for the construction of the coke plant and Arthur G. McKee & Co., Cleveland, were selected as engineers and contractors for the construction of the blast furnace plant. The work of designing was started

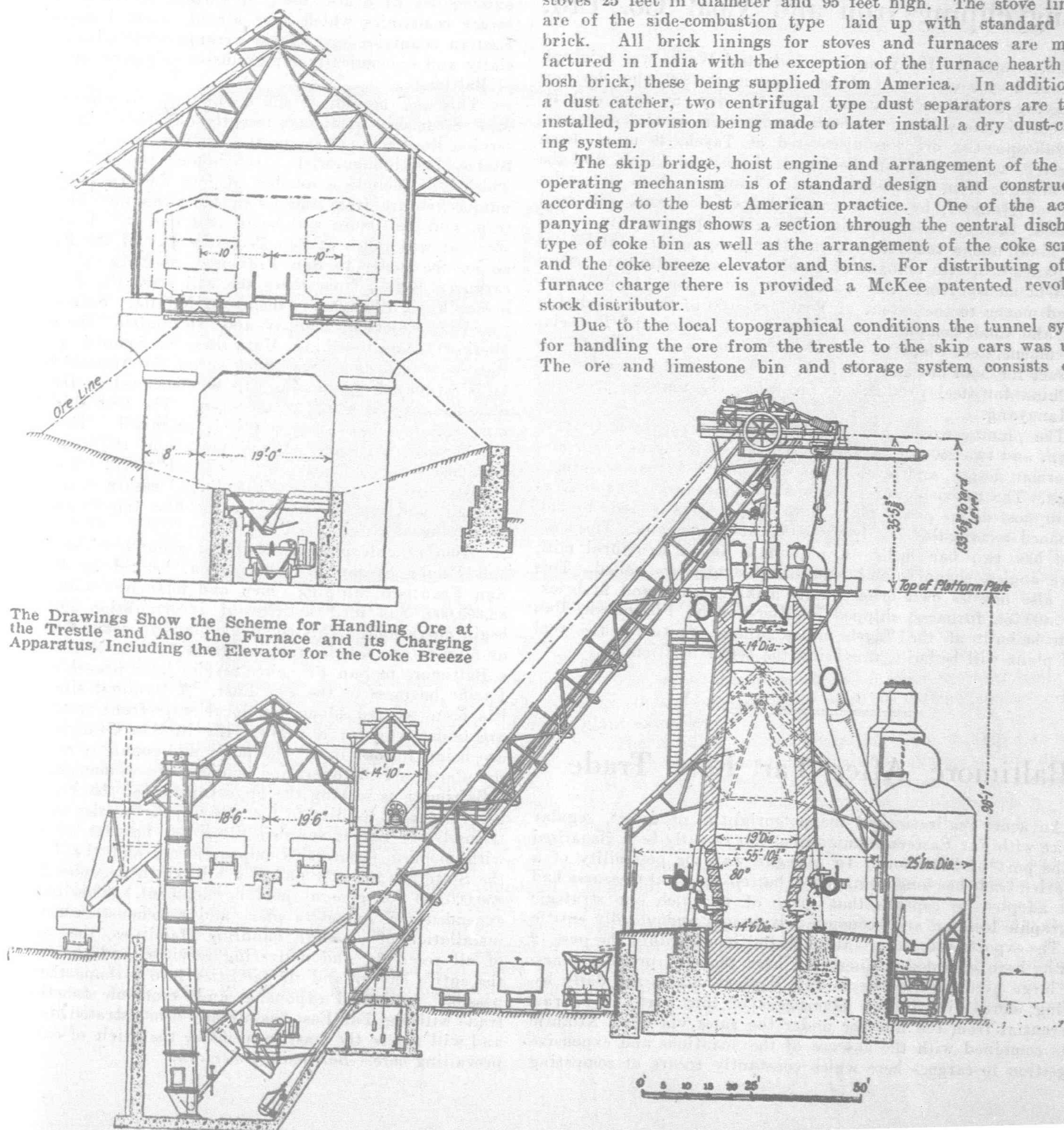
during March, 1919, and shipments of materials were started during April. At the date of this writing approximately 85 per cent. of the materials of construction have been started overseas and the balance will probably be on shipboard before the end of the year.

During September 1919, the Indian Iron & Steel Co. decided to further increase its capacity, and accordingly orders were issued to proceed with the construction of a second blast furnace of similar design to the first. The layout of the completed plant provides for the ultimate installation of six blast furnaces, each of 350 to 400 tons capacity, sufficient coke plant capacity to provide fuel for these furnaces and the addition later on of open-hearth furnaces and rolling mills to finish all the iron produced in the blast furnaces.

The blast furnace plant consists of a blast furnace 85 feet high, having a hearth fourteen feet in diameter and a bosh 19 feet in diameter. The furnaces are arranged in pairs, each pair having a common cast house. The product of the furnace is to be disposed of in ladles, Dewhurst cinder cars being provided for the slag and short-pour Pollack ladles of 75-ton capacity for the iron. Due to the amount of ore available suitable for the making of ferromanganese, extra large stove capacity is provided, the installation consisting of five hot blast stoves 25 feet in diameter and 95 feet high. The stove linings are of the side-combustion type laid up with standard 9-in. brick. All brick linings for stoves and furnaces are manufactured in India with the exception of the furnace hearth and bosh brick, these being supplied from America. In addition to a dust catcher, two centrifugal type dust separators are to be installed, provision being made to later install a dry dust-cleaning system.

The skip bridge, hoist engine and arrangement of the bell-operating mechanism is of standard design and construction according to the best American practice. One of the accompanying drawings shows a section through the central discharge type of coke bin as well as the arrangement of the coke screens and the coke breeze elevator and bins. For distributing of the furnace charge there is provided a McKee patented revolving stock distributor.

Due to the local topographical conditions the tunnel system for handling the ore from the trestle to the skip cars was used. The ore and limestone bin and storage system consists of a



concrete trestle, and a tunnel for the scale car runs the entire length of this trestle. The roof of the tunnel consists of a series of unit bin bottoms each provided with a series of continuous segmental type gates arranged for hand operation from the scale car platform. This arrangement provides a continuous line of gates so that practically all the ore and stone held in storage under the trestle is available at the gates for discharge into the scale cars. The entire stock trestle is double tracked, and on account of the heavy rains at certain seasons it is covered with a steel roof structure.

The equipment includes two blowers of the Parsons type of 45,000-cu. ft. per min. capacity and 3500-hp. British B. & W. type boilers. The boilers and blowers are to be operated with steam at 200 lb. pressure with 100 deg. superheat. They were furnished from England. For handling the hot metal two double-strand pig-casting machines are to be installed, equipped with ladle tilting rigs. It is expected that the first furnace will be placed in operation during the latter part of 1920.

Hangyehping Iron and Coal Co., Ltd.

The site of the Hanyang Iron and Steel Works was originally selected by a viceroy of Hupeh Province in 1892, who, desirous of having a Chinese iron and steel foundry, as they call it, selected this site without reference to either ore or coal resources.

Subsequently, ore was discovered at Tayeh, 48 miles down the river, a very rich and the largest deposit in China, and the coal brought from Pinghsiang, near Changsha, about 316 miles south of Hankow, by junks and lighters. Railroads will soon be used, thereby reducing cost. The entire property is owned by China, under the name of the Hangyehping Iron and Coal Company, Ltd. On account of revolutions and failure to secure sufficient money from the government, Japanese banks have loaned money to the extent of Yen 15,000,000 to the Hanyehping Iron and Coal Company, as a result of which the Imperial government steel plant at Yawata has secured an advantageous contract for both ore and pig iron, and some steel. The demand in China for steel products is far below the tonnage produced at Hangyang.

The plant consists of two 100-ton blast furnaces, German design, and two 250-ton furnaces, built about five years ago, also of German design, and seven 30-ton open-hearth furnaces, German design. The turbo blowers are from Parsons, Ltd., England, as is also most of the power plant machinery. Coke is made by old-fashioned rectangular beehive practice at Pinghsiang. The steel plant has two bar mills, a plate mill and a structural mill, where angles, channels and some other shapes are rolled. This firm also has its own brick plant, making silica and firebrick. New 400-ton furnaces, shipped by Rier-Conley, Pittsburgh, Pa., are to be built at the Tayeh mines, where eventually the real steel plant will be built, this being the better location.

Baltimore After Far East Trade

An acute realization of the potentialities of direct, regular service with Far Eastern countries has but recently been visualized in the port of Baltimore. In a vague way the possibility of a lucrative trade has long been sensed, but no practical measures had been adopted to capture that share of it which our strategic geographic location and economic advantages undoubtedly entitle us. The exports and imports through Baltimore within the past 12 months have enormously increased over those of pre-war years. The large producers in the Middle Western States are daily becoming more alive to the advantages of this port. The rail differential from the interior under the rates via other Atlantic ports combined with the absence of the vexatious and expensive congestion to cargoes here which constantly recurs at competing

ports, are controlling factors in the routing of shipments, while our lower costs for handling make a strong appeal to the operators. It was but natural, therefore, that this expansion should stimulate us to seek to include trade with the Far East, particularly since the Panama Canal has so shortened the route from the Atlantic seaports of the United States.

The first step in this direction has been taken by the Green Star Steamship Corporation, which had sufficient vision several months ago to inaugurate a regular service to China, Japan and other Eastern points. This was rather in the nature of an experiment, but it has proved a happy one. An occasional boat was planned at first, but the interest evoked was such and the offerings so rapid and consistent that the service now includes three vessels on regular schedule, with every prospect of greater expansion. Whole success was anticipated, the development which ensued after so short a period of operation has been in excess of anything hoped for. The commodities carried are astonishingly varied—large quantities of steel, wire rods, steel sheet bars and tin and steel plate from the Middle West—manufactured cotton goods and superphosphate from Baltimore and surrounding territory, the latter, in fact, leading the list with the remarkable total of over 23,000 tons to China and Japan during the past two months. A number of automobiles have also been forwarded, and one or two of the larger companies which have already started agencies in these Eastern countries have closed arrangements advantageous financially and economically for exclusive shipment through the port of Baltimore.

This was the pioneer effort, but there are others. The Pacific Mail Steamship Company, recently established in Baltimore and serving the Pacific Coast ports of South America and the United States, has inaugurated a continuous round-the-world service, which will include a number of Far Eastern ports. This is a unique venture from and to an American port by an American ship, and Baltimore will begin and end it. Leaving this city the boat will touch at San Pedro by way of the Panama Canal, go up the coast to San Francisco, discharging and receiving cargo en route; from there she will cross the Pacific to Yokohama, Kobe, Shanghai; thence to Manila, Saigon, Singapore, Calcutta, Colombo, Bombay and Alexandria; thereafter to the Mediterranean, touching Marseilles, to Spanish ports, making Barcelona last, and thence back across the Atlantic to Baltimore. It is estimated six months will be consumed in the voyage, the distance covered being 26,000 miles. The first ship has already left, and one boat each month is promised. Through bills of lading will be issued to any port, and the company has established offices in each of the larger world cities with every facility for representation. A large return cargo is already in sight and the bookings for the first trip were exceedingly gratifying.

Another enterprise is breaking ground. The Atlantic-Gulf and Pacific Steamship Corporation, backed by Baltimore and San Francisco shipping men and financiers with a capital of \$2,000,000, has filed articles of incorporation and will shortly begin operations. This company plans to commence with a fleet of four to six vessels, ranging from 7,500 to 9,000 tons each, on a Baltimore to San Francisco service later branching into trans-Pacific business to the Far East. A terminal site of 1,000 feet has been secured along the local waterfront, and negotiations are under way for a similar site in San Francisco. Agencies are being formed in all the ports and countries which figure in the plans, and the operation is under expert management.

Baltimore is seeking the opportunities of the Far East as she has risen with avidity to the other opportunities now presenting themselves. She is supplementing her natural advantages with modern progressive improvement, and the Legislature of the State has recently passed a bill which provides for a loan of \$50,000,000 for general port development. This money will be expended for extensive pier and warehouse construction, the installation of modern handling facilities, the systematizing of all receiving and delivering services, and the co-relation of the entire harbor and its facilities into a shape that will make possible unlimited expansion and economic functioning. The trade with the Far East has already demonstrated its possibilities and will not be the least to profit by the spirit of enterprise now prevailing here.—*Baltimore American.*

New Yangtsze Furnace Goes into Blast

THE new furnace of the Yangtsze Engineering Works, Ltd., went into blast on June 26. Among the two hundred guests who witnessed the inauguration of this important development at the works on Seven Mile Creek, Hankow, Mr. William Pigott, president of the Pacific Coast Steel Corporation, manifested the interest of the American steel industry in Chinese practical awakening.

Hitherto, the iron ore for the Yangtsze Engineering Works was drawn from the Pao-hsing iron mine, near Wuhu; but hereafter supply will be secured from the Elephant Nose iron mine at Tayeh, worked by the Hupeh Mining Bureau. The Elephant Nose has the advantage of proximity. Coke is obtained from the Liu-ho-kou mine.

Mr. Wong Kwong, general manager of the works, explained to a representative of THE FAR EASTERN REVIEW that only foundry iron is at present being manufactured. Analyses are as follows:—

		No. 1.	No. 2.	No. 3.
Silicon,	per cent.	2.0 —3.0	1.5 —2.0	1.0 —1.5
Sulphur	"	0.01—0.02	0.02—0.04	less than 0.05
Phosphorus	"	0.5 —0.5	0.5 —0.6	0.5 —0.6
Manganese	"	1.0 —2.0	about 1 p.c.	about 1 p.c.

The furnace is designed to produce 100 tons of sand cast pig-iron per day. It is supported by six cast iron columns, has six tuyeres, and is lined with fire-bricks purchased from the Kailan Mining Administration, Tientsin. The cast house is about 50-ft. span and 100-ft. long with steel columns and iron roof.

Bosh cooling is effected by sprays held on the steel plate jacket by plate strips. Also in addition there is one row of copper bosh plates immediately above the tuyere line. There is no cooling above the mantel but a permanent spray pipe is installed on the shell to take care of any possible hot spots that may be developed in the future.

The furnace top is of the double bell stationary type and is served by a single skip counter balance weight through a balancing tower at the bottom near the hoisting engine. There are two sets of horizontal hoisting engines (one for spare) each with double high pressure cylinders 12-in. diameter by 20-in. stroke designed and built by the Yangtsze Engineering Works.

There are one primary dust catcher of ordinary type and one centrifugal whirler for cleaning gas for stoves and boilers.

Filling on the bottom is by means of buggies for ore, limestone and coke. Cast iron plates form the floor of the stock house.

The blowing equipment consist of two horizontal connected cross compound engines and one tandem compound engine. As during the time of war, it was impossible to purchase any blowing engines, the steam end of these engines was purchased ex-stock abroad, while the air end was designed and made in the Yangtsze Engineering Works here, being equipped with plate valves of the Allis-Chalmers type.

Air for blowing engines is taken through two cylindrical containers arranged and cooled similar to a surface condenser with air conduit to the three blowing engines. This is calculated to precipitate moisture and afford a drier blast, especially in the hot summer weather when the atmosphere is high in moisture.

Two surface condensers each about 1,200 square feet condensing surface and calculated to give 25-in. of vacuum have been installed.

In the boiler house are four boilers of the watertube type, each of 1,500 square feet of heating surface and 150-lb. working pressure, provision being made for two more. They were designed and built by the Yangtsze Engineering Works, as were also the gas burners of Peaton type. Condensate from the condensers is filtered and used for boiler feed water with provision made for "made up" water from the water tower. There are two Weir pumps for feeding boilers and two horizontal Worthington pumps for general and fire services. The latter have connections for feeding boilers in case of need, and for pumping direct to furnace bosh and spray cooling and cast house, so that in case it is found necessary to cut off water supply from the tower, these two pumps will be sufficient to keep the furnace going. Boiler feed water is heated by exhaust steam from the service pumps.

The main water supply flows from a large settling pond at the back of the Yangtsze Engineering Works by gravity through an 18-in. cement pipe line and is pumped to the water tower by two horizontal steam pumps. Either one of the above two pumps is calculated to furnish sufficient water supply, the other being a spare.

All discharge water from the condensers, stoves, furnace, etc., is returned through deep drains back to the settling pond or to a cooling pond near the water tower and is used over again.

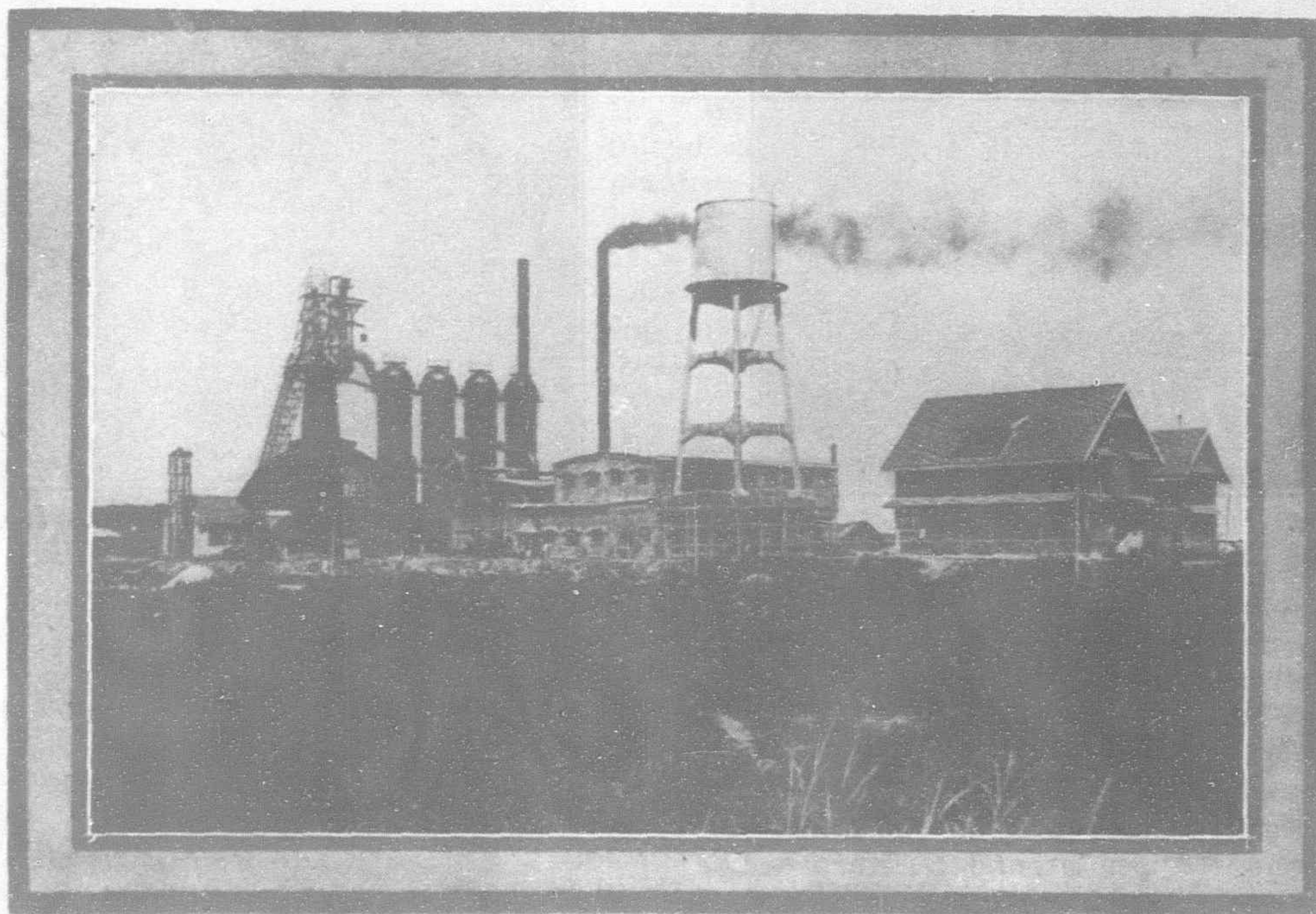
Ample filters have been installed to insure clean water for all purposes.

The water tower, which is of concrete reinforced, is 115-ft. over all, and has a capacity of 80,000 gallons, sufficient for future plant extensions.

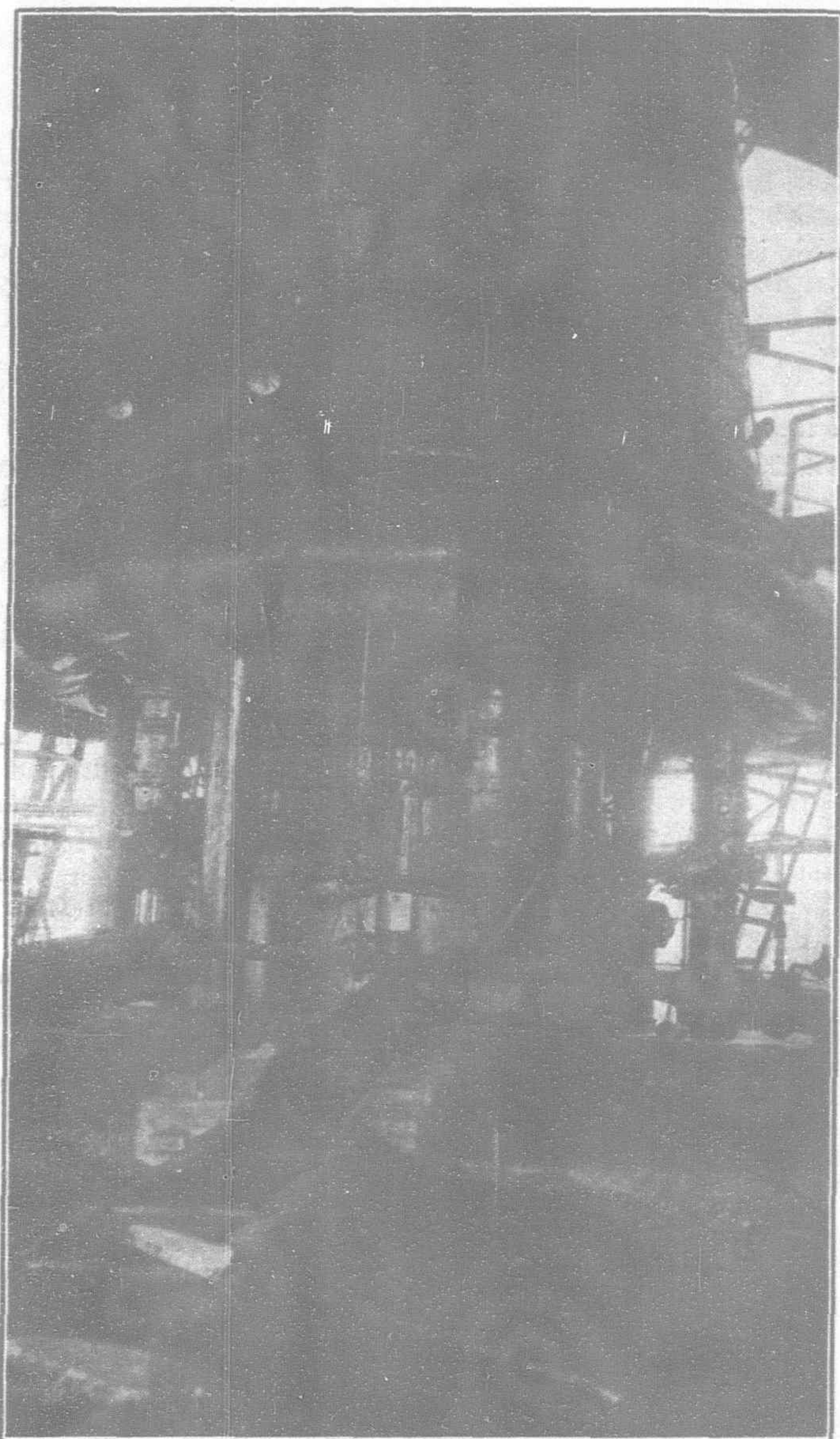
The handling of raw materials from the bund to stock-yard is rendered exceedingly difficult, by reason of the difference of 45-ft. to 50-ft. between high and low water in the Yangtsze River. While at present manual labor is employed as a temporary measure, this condition will be taken care of by the installation of rope haulage, electrically operated.

A steam generating set is on the way coming out from England, and will be installed in the main engine house. This equipment is to run on steam from the main boiler house and will furnish power for the whole Works allowing the present generator equipment to be held in reserve.

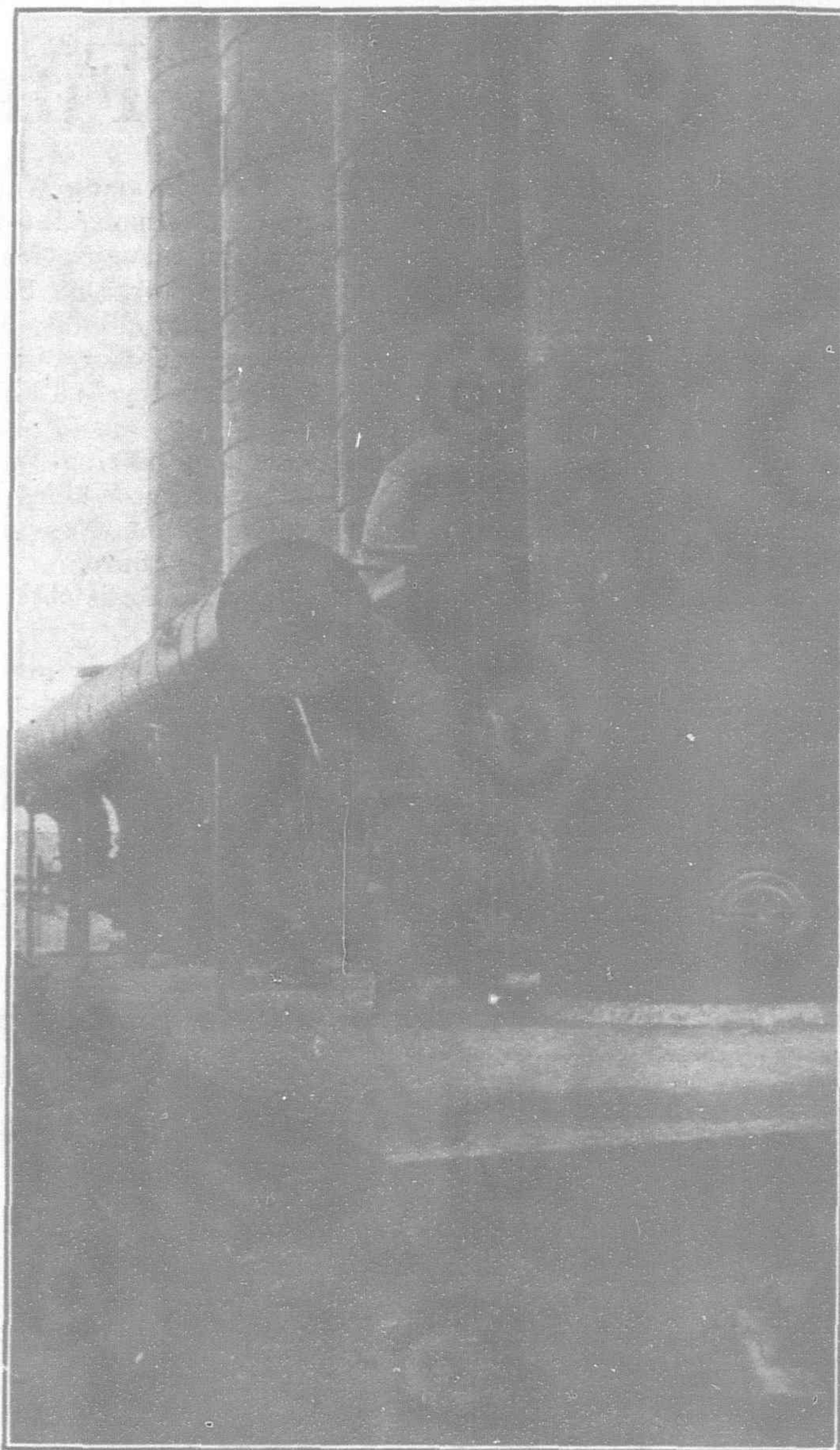
The buildings are: A three-storied brick building for combined purpose of office, laboratory and living quarters; a blowing engine house of brick and reinforced concrete roof 50-ft. by



General View of the New Blast Furnace, Yangtsze Engineering Works, Ltd., Hankow



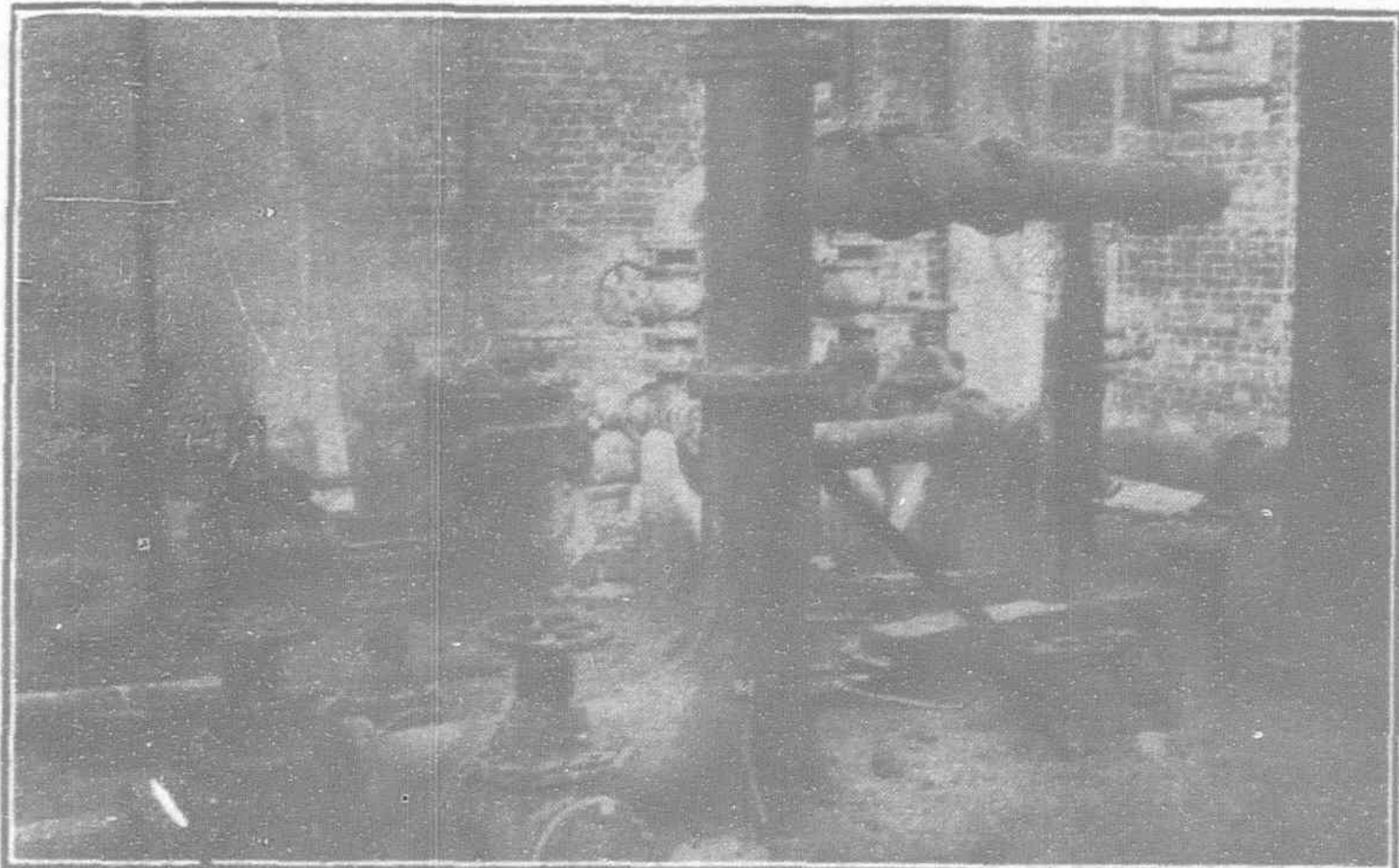
The Bell Furnace, Hankow



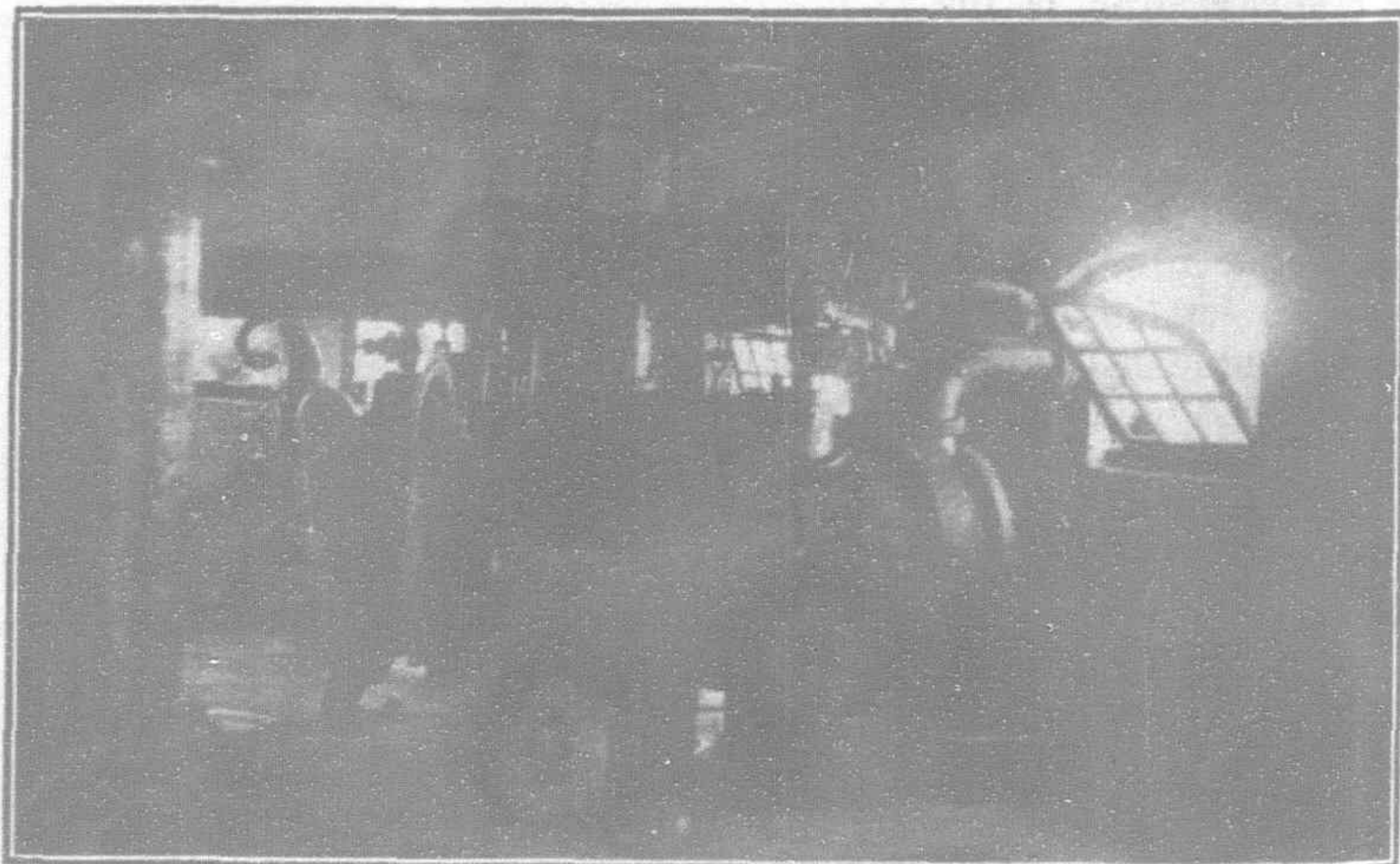
Hot Stoves and Chimney Valves, Hankow

90-ft. equipped with a 10-ton overhead travelling crane; the condensers building at the South-east end of the blowing house, separated by a curtain wall, being built also of red brick with reinforced concrete roof; a boiler house of red brick and reinforced concrete roof 40-ft. by 95-ft.; a hoist house of brick and cement face and red tiled roofing; and a haulage house near the shore of the same construction. Other suitable buildings for housing coolies, workmen and for men around the furnace are also installed.

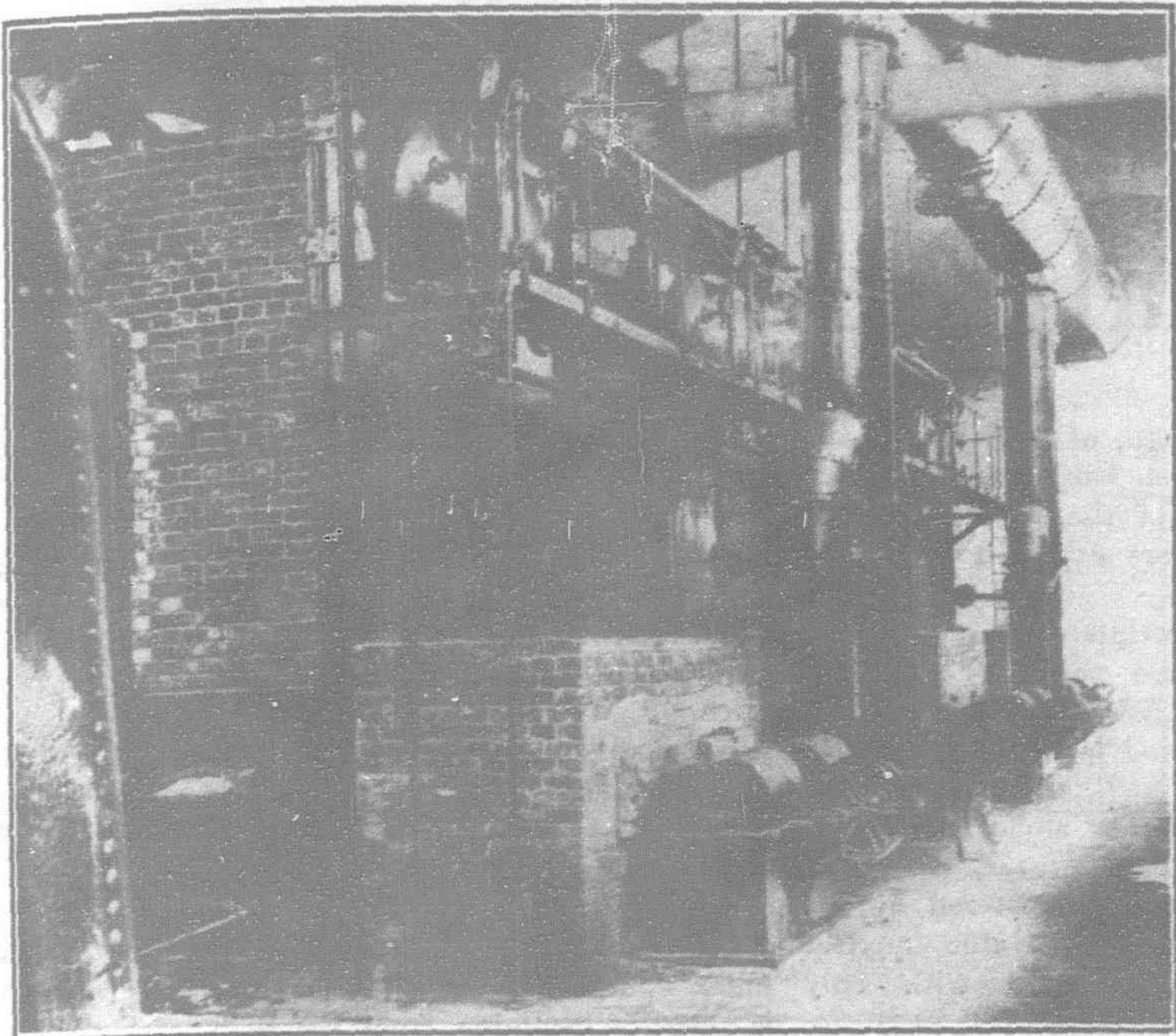
Launches and tugs took the guests down from the Racine, Ackermann Jetty to the site of the Works in Seven Mile Creek. On arrival, they were received by Mr. Wong Kok-shan representing the directors of the company and by Mr. Wong Kwong, the general manager, who showed them round the blast furnace plant. They were given an opportunity of seeing the tapping of the iron, which was arranged to take place about that time. The guests were then led to a spacious matshed decorated with flags and buntings, in which refreshments were served.



Pumping Plant, Hankow



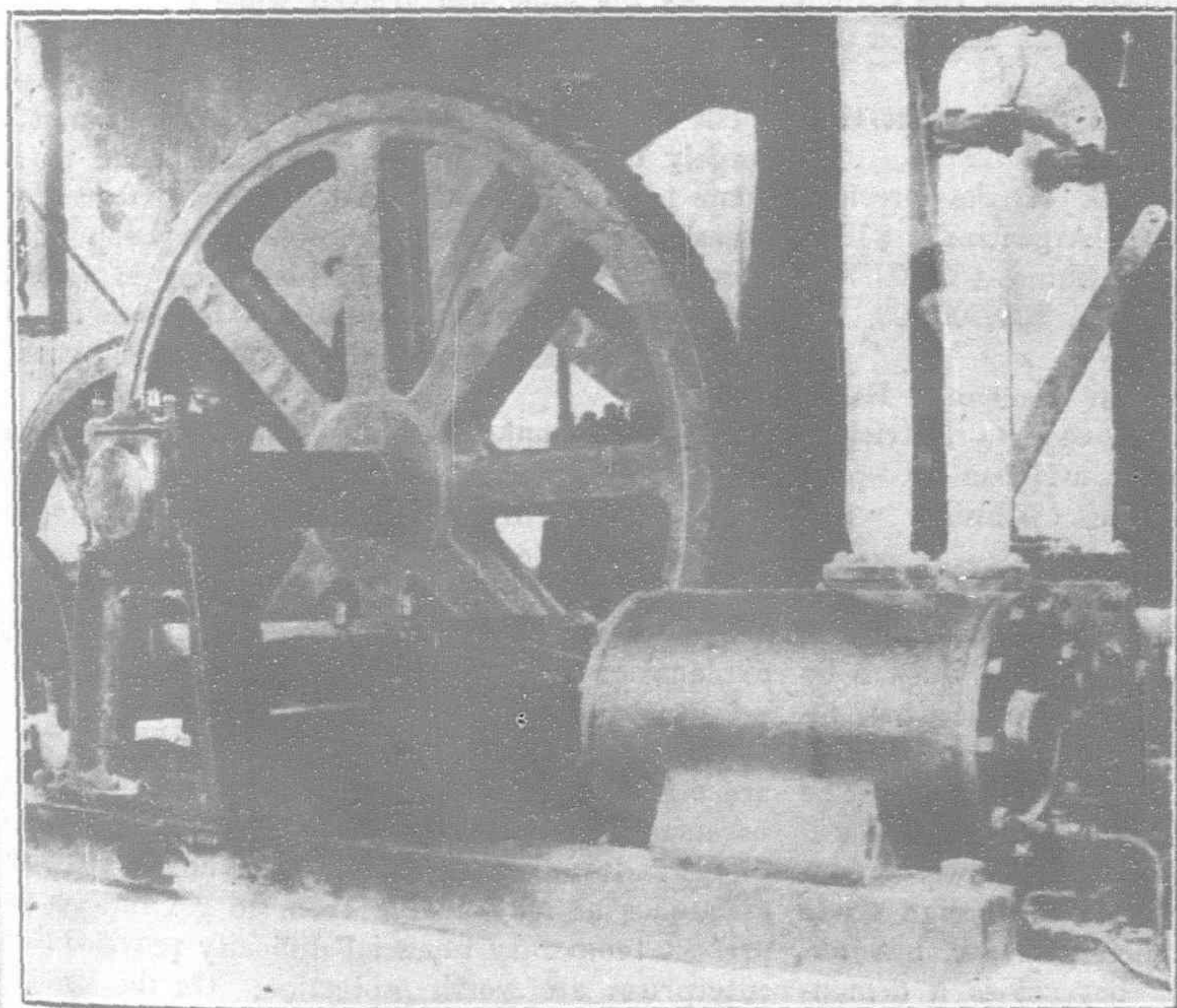
Condensing Plant, Hankow



The Boiler Plant, Hankow

Mr. Wong Kok-shan welcomed the guests in a Chinese address, which was replied to by Mr. Han Kwong-tsao, chief of the civil service, on behalf of the tuchun and civil governor.

Mr. C. C. A. Kirke, acting British Consul in Hankow, replying on behalf of the foreign guests, congratulated the Works on the success they had achieved, and was followed by Mr. L. E. Gale, who proposed continued prosperity to the Yangtze Engineering Works.

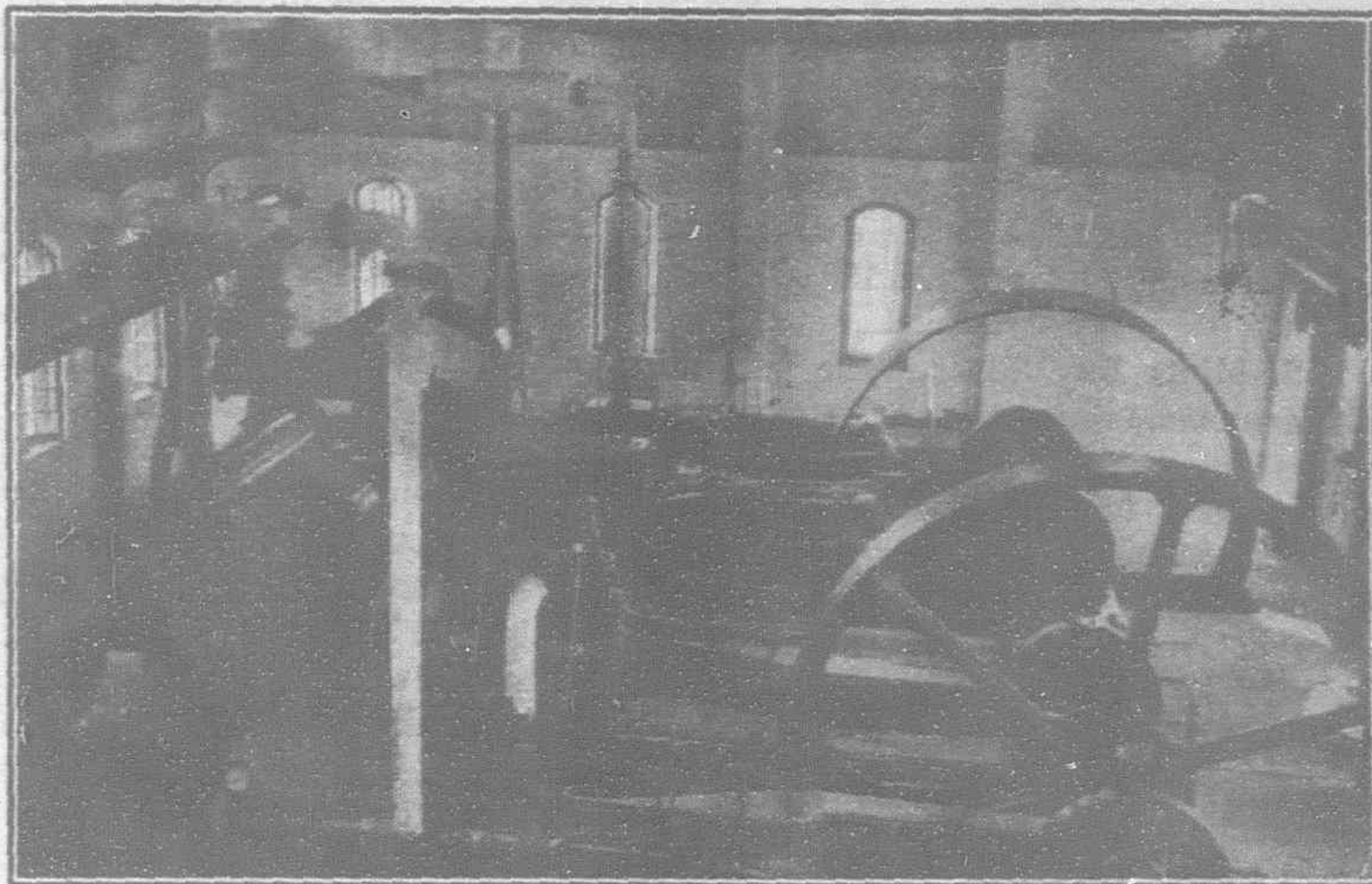


Skip Hoisting Engines, Hankow

General Manager Wong Kwong, in the course of an interesting speech, said "it has often been commented on that China, with her vast population and territory, should do more in the development of her iron industry, which is the backbone of all industries, than she has done in the past; and acting on this principle, we have been bold enough to make this modest attempt in adding one more furnace in China proper to those already in existence in Hanyang, so long the solitary beacon in this realm of industrial possibilities. Our aim is not one of rivalry with others but of mutual help and co-operation, as we believe that there is room for more.

"The plant which you see to-day is modern in every respect, and with the exception of the furnace, the hot stoves and dust catcher with their connections (the designs of which were sup-

plied by Perin and Marshall of New York) the whole plant and equipment were designed by the engineering staff of the Yangtze Engineering Works, and the materials for the whole plant (excepting pumps and three ready-made engines) were fabricated and erected by us. Owing to the considerable delay attending the acquirement of the required land, the foundation work was not commenced till the latter part of January 1919, and the furnace would have been completed earlier, had it not been for the one or two months of flood we had last year, and the month of snowing weather we had in the early part of this year.



Blowing Engines, Hankow

"We may be permitted to say that having overcome the initial difficulties in the fabrication and construction of such a plant in China, to the extent of even making certain alterations in the original designs to suit local conditions, we feel confident of being able to execute similar orders for other iron and steel works in the Far East. However, the future success of our Works depends upon your good-will and support, which we wish to bespeak."

Some Light on Queer Transactions

At a recent meeting of the shareholders of the Bank of China, some light was thrown on the financial transactions of well-known Chinese official personages. After Governor Feng Keng-kuan had submitted his report, certain inquisitive shareholders began to put leading questions as to the resumption of specie payments and other matters. The replies given evoked some interesting statements.

Mr. Hsie Chien-liu said, "I was surprised to see in the list of the bad debts the name of Mr. Wang Ko-min, ex-minister of finance, who owes the bank a sum of \$27,000. He is a shareholder of \$10,000 worth of shares, and if his shares should all be confiscated, he still owes a sum of \$17,000. Liang Chi-chiao has also owed a sum of \$10,000 for a number of years and the Society for the Promotion of the Constitution another sum of \$30,000. In addition to the above there may be other prominent men and associations, who should not refuse to pay their debts are in the list. Has the bank made any effort to collect these debts?"

In reply the governor said, "Wang Ko-min has already redeemed his debt; but as the debt of Mr. Liang Chi-chiao was contracted during the time when the late Mr. Tang Hua-lung was governor of the bank, it is impossible to make him pay the amount. Therefore the matter has to be brought to the court for settlement."

It was asked whether General Chen Er-an has owed the bank a sum of \$1,000,000, and in reply the governor said that of course such debt had to be paid by the Government, as it was employed for military purposes. Some shareholders demanded that the bank should furnish a list with fuller details about various bad debts which could not be collected in spite of the efforts of the bank, etc.

Engineering, Financial, Industrial and Commercial News

FINANCIAL

Japan's Loans.—According to an official announcement, the total of national loans of Japan amounts to Y.2,803,549,000 consisting of home loans amounting to Y.1,493,401,000 and foreign loans Y.1,311,127,000 beside extraordinary treasury bonds amounting to Y.533,100,000.

U.S. Mints Buy Silver.—The provisions of the Pittman Act are mandatory and, in accordance with them, the Secretary of the Treasury has given orders to the Director of the Mint to buy silver at \$1 per ounce, 1,000 fine, delivered at the option of the Director of the Mint at the Assay Office in New York or the mints in Philadelphia, Denver and San Francisco, up to the aggregate amount of 207,000,000 ounces. Under the terms of the act the silver so purchased must be the product both of mines situated in the United States and of reduction works so located, and clear and unequivocal proof to that effect will be required. Forms for such proof may be obtained at said assay office and mints.

Half of Omsk Loan Paid Off.—It is reported that about half of the \$38,000,000 loan which a syndicate of American and British bankers arranged for the so-called Omsk Government last December has been paid off and a proportionate amount of the collateral, which consisted entirely of gold coin and bullion, has been released.

Reports current in the New York financial district were to the effect that the gold thus released had been disposed of to the Japanese Government, and that because of this sale to Japan, arrangements which had been in the making for the export of gold from the United States to Japan had been canceled or at least deferred. The original loan to the Omsk Government, then presided over by Admiral Kolchak, was first talked of last Summer, but was not finally arranged until December, when an American group, headed by Kidder, Peabody & Co., the Guaranty Trust Company and the National City Bank, in conjunction with a group of London bankers, agreed to advance approximately \$38,000,000 in a loan to run for eighteen months. The loan was divided \$22,500,000 to the American group and approximately \$15,500,000 to the British interests, and was secured by the deposit of about \$40,000,000 in gold with the Hongkong and Shanghai Bank, at Hongkong. It was understood at the time that this was to be merely the first part of a comprehensive plan for financing the All-Russia party, which was then fighting the Soviets. However, so far as has been reported, nothing further was done. According to the announcement of last December, when the loan was consummated, the maturity was not to come until June, 1921, and no explanation was given as to why any portion of the loan should have been liquidated in advance of the fixed date.

Financial Worries in Penang.—Owing to the slump in prices in Penang, the Penang Bazaar has arranged to settle obligations by payment in instalments. It is not expected that there will be any immediate reversion to the high prices which have ruled recently.

Banking in Swatow.—The large trade of Swatow was carried on without a foreign bank until the

establishment, a few years ago, of a branch of the Bank of Taiwan. A French bank has now been established with the trade of the French colonies especially in view. Others are expected to follow.

Philippine Customs Receipts.—The Customs collections for all Philippine ports for the first quarter of 1920 total P.261,333.62 less than the collections for the same period in 1919, the figures being P.3,339,736.07 and P.3,601,069.69, respectively, for the two years. Manila alone showed an increase in collections which, however, was not sufficient to cover the decrease registered by the other ports. Manila's collections this quarter amounted to P.3,050,768.17, compared with only P.2,991,057.44, showing an increase of P.59,710.73. It was explained at the bureau of customs that the slump is due to the fact that owing to the high cost of rice in Saigon and other neighboring foreign ports, only a very small amount of that cereal has been imported this year. The fluctuations in exchange were also partly responsible for the small amount of rice imported, which means only a comparatively small amount of duty collected from that product.

Gold to Japan.—Japan is now one of the heaviest importers of American gold.

One-fourth of the gold shipped out of the United States since the gold embargo was removed ten months ago went to Japan.

The total outflow of American gold in that time amounts to \$474,000,000.

These countries got the bulk of the precious metal: Japan, \$100,820,000; Argentina, \$109,000,000; Hongkong, \$55,000,000; China, \$52,000,000; British India, \$36,000,000; Spain, \$29,000,000.

Korean Bank Expand.—The Hansung Bank, a Korean institution, has removed its restriction that all stockholders be Korean and has accepted subscriptions from Japanese, Chinese and foreigners.

Barring of Yen Starts Trouble.—Japanese and Chinese shops at Vladivostok closed on July 3 by way of demonstration. The municipality has resolved to start an opposition boycott of foreign merchants agitating against the new currency. The rumored objective of the agitation is the replacement of the rouble by the yen. The newly organized committee for the protection of foreign trade headed by the British financier, Gade, has announced that the foreigners' boycott is a demonstration against the ban on dealings in yen. The same committee protest against the British negotiations with Krassin on the ground that Russian co-operatives are controlled by Bolsheviks.

Millions for Harmony.—The Japanese government has made a grant of Y.2,000,000 to the Kyochokwai, the Capital and Labor Harmonization Association. The home department states that with its own capital aggregating Y.1,300,000 and public contributions expected to amount to Y.5,700,000, the association will have funds aggregating nearly Y.9,000,000, including the government subsidies. "With such a colossal capital at its disposal, the association ought to be able to take every necessary step to promote its cause. It will be highly advisable for the association to invest in such necessary enterprises as insurance

against loss of work, the establishment of a labor hospital, and a charity home for the unemployed."

Japanese June Stock Delivery.—The amount of shares for June delivery handled on the Tokyo Stock Exchange during June numbered 567,550 their value reaching Y.36,376,240, or an average price of Y.60.09 per share. Compared with the previous figures, there was a decrease of 257,580 in the number of shares, and Y.28,557,680 in the value. The average price also shows a falling off of Y.14.60.

Cost of Living in Japan.—The Bank of Japan's index figures show that the cost of living in Japan is steadily declining from the high level which it reached last year. The figures for May show that the prices of 43 staples declined and only in the case of four was an increase shown. The average decline for May compared with April was about 10 per cent.

Protest Against Increase of Taxes.—The Chambers of Commerce of Japan are of opinion that the present time is a very ill-advised one for increasing the income tax. At a meeting of all the Chambers of Commerce Monday evening, the following resolution was passed:

"As the time has arrived when the income tax for the next fiscal year has to be specified, it is highly advisable to call attention of the Government that the recent business depression must be largely considered in fixing the amount of the income tax for the next fiscal year, on account of the disastrous effects that followed the slump in the economic world. Should this factor be ignored, not only will unfair impositions be levied on the people, but also their difficulties will be enhanced."

Japanese Banks Aiding Business.—Representatives of the leading Japanese banks, at a meeting held recently in the Bank of Japan, Tokyo, arranged to aid sound business through the medium of the Japan Industrial Bank. Mr. Hijikata, president of that institution, issued the following explanation: "Since the recent business depression set in various measures of relief have been taken at different times in different places. But there are still many businessmen considerably restricted because of the shortage of capital. It is deemed highly advisable, therefore, to render them such assistance as may enable them to get through the present temporary financial difficulty provided their enterprises are worth protection. On the strength of this conviction, the Japan Industrial Bank has decided to take the necessary steps in co-operation with the banking syndicates in Tokyo, Osaka, Nagoya, and other leading cities. For this purpose the Industrial Bank will be ready to advance any required capital for such enterprises as may be properly guaranteed by any of the leading banking syndicates in Japan. The present measure is, of course, merely temporary, and those cases only will be considered where repayment of advances is possible within a year at the latest."

Japanese Customs Receipts.—The Japanese customs receipts for the month of May totaled Y.6,533,902, showing a decrease of Y.120,494 as against the corresponding month last year. The decrease is principally due to the fact that the customs receipts realized in Formosa are being in-

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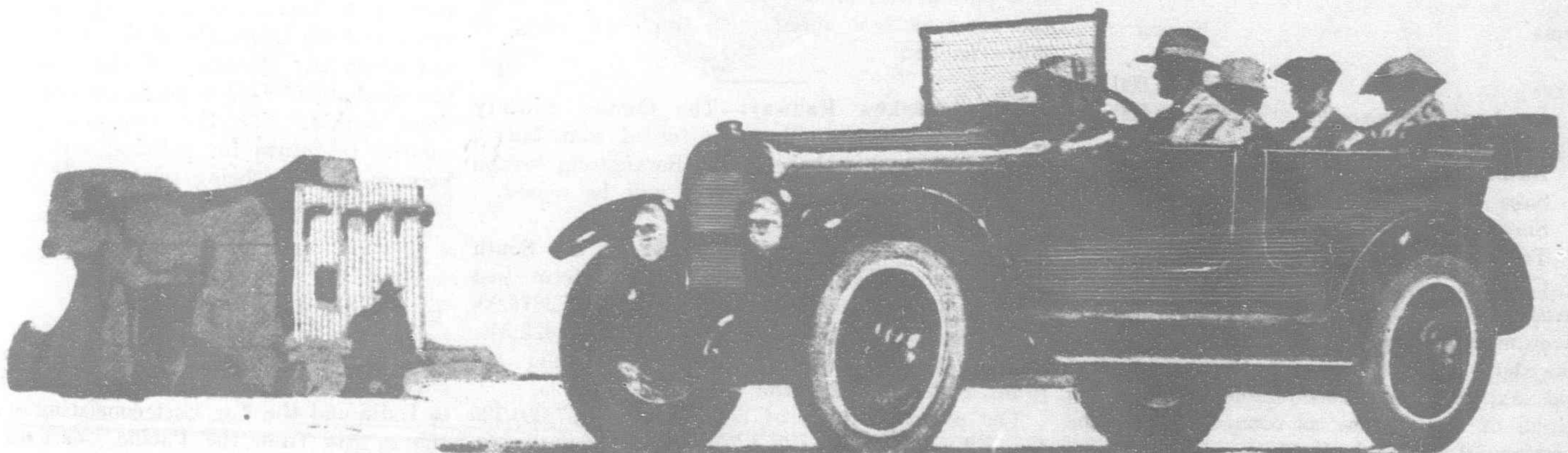
Sturdy frame and rear axle.

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Ignition, American Bosch Magneto.

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incorporated into the revenue of the Formosan government general from the current financial year.

Japan's Postal Savings.—Investigations by the Japanese department of communications show that the amount of money deposited at the postal savings banks throughout Japan on June 26 totaled Y.784,753,410, the depositors concerned numbering 23,174,838. Compared with the end of the previous month, the figures show an increase of 163,510 in the number of depositors and of Y.34,878,020 in deposits.

Japanese Model Pawn Shop.—The Mitsubishi interests are contemplating the establishment of a model pawn shop in Japan, to be capitalized at Y.100,000, primarily for the benefit of the poorer classes. There are now 3,000 pawn brokers in Nippon, but the rate of interest is enormous, usually being 4 sen per one yen per day. The proposed organization would charge 1 sen and pay no dividends to the shareholders.

Relieving Yarn Merchants.—The advance of funds to cotton yarn merchants for export trade made by the Bank of Japan through the Japanese exchange banks totaled Y.13,000,000 up to June 22. The bank continues making advances up to the extent agreed upon, viz., Y.40 million. For the relief of cotton yarn merchants an agreement has been reached between the syndicate banks and the cotton yarn syndicate, in pursuance of which an initial Y.2 million was handed over on the security of the yarn on June 22.

Japanese Banks.—The Japanese department of finance gives the number of banks doing business on June 26 as 2,072, with a combined capitalization of Y.1,800,474,885. The figure is composed of 7 special banks with a combined capitalization of Y.310,000,000; 46 farmers' and mechanics' banks with a combined capitalization of Y.68,500,000; 656 savings banks with a combined capitalization of Y.335,350,150; 1,350 ordinary banks with a combined capitalization of Y.1,081,449,735; a branch of the Bank of Chosen and 12 branches of foreign banks with a combined capitalization of Y.5,175,000. Compared with returns made at the end of last December, there was an addition of one ordinary bank with a capital of Y.1,000,000 and the augmentation of capitalization by 31 banks, the amount of the increased capital being Y.35,041,550. The number of those establishments engaged in monetary business other than banking, were 226 companies, with a combined capitalization of Y.412,022,000 in addition to 23 companies carrying on the sale and purchase of negotiable instruments and other bonds, their total capitalization amounting to Y.4,244,000.

Japan's Revenue Excess.—According to returns issued by the Japanese department of finance, the actual revenue for the current fiscal year which ends this month, shows considerable excess over the budget estimates, as detailed in the following table:

Items	Excess Yen
Taxes	170,256,000
Land tax (decrease)	53,749,000
Income tax	67,000,000
Business tax	10,294,000
Sake tax	28,275,000
Sugar tax	14,942,000
Textiles tax	14,574,000
Customs tax	21,623,000
Revenue stamps	46,947,000
Government enterprises	30,000,000

As the above figures show, with the exception of the land tax, there is a considerable increase in every item of the revenue as compared with the figure estimated in the budget, the gross excess aggregating nearly Y.250,000,000 at the end of May.

Pacific Development Company.—Pacific Development Company is offering a block of stock to its shareholders at par, \$50, each holder of two shares of present stock outstanding having a right to subscribe to one share of new stock. Rights accrue to shareholders of record June 19 and subscriptions are payable in full July 3 at the option of shareholders, or 25 per cent. on July 3 and the balance in three monthly installments of 25 per cent. each. The whole offering has been underwritten by Hayden, Stone & Co. Stockholders recently authorized an increase in the authorized capital stock from \$10,000,000 to \$25,000,000. The new offering will bring the amount outstanding up to \$12,750,000. The Pacific Development Corporation controls the following well-known enterprises: The Pacific Commercial Company, transacting business in Australia and the Orient; Hartman-Pacific Company, with offices in a dozen big American commercial centres; International Vegetable Oil Company of Georgia; American Machinery and Manufacturing Company, also of Georgia, and the Andersen, Meyer Company of China.

Bank of Chosen.—The report of the Bank of Chosen gives a brief survey of financial conditions in Korea. In spite of the drought last summer and cholera and influenza epidemics in the later months, the export trade expanded considerably, and good progress has been made with the extension and improvement of transport facilities. At present the railway mileage is very much smaller than that of Japan proper, where there are 8,640 miles of line working, as against 1,251 in Chosen. But during 1919 the aggregate mileage of new lines sanctioned by the government amounted to 1,085 miles, and at the end of the year there were over 1,500 miles in course of construction. During the second half of the year the capital of new companies amounted to sixty-one million yen, an increase of 50 per cent. over the corresponding period of 1918, and of nearly fourteen millions over the total for the whole of that year. Of the total, over thirty-five millions was raised by manufacturing concerns, while three new banks account for Y.5,200,000. The country's exports amounted to Y.125½ million, and imports to Y.159½ millions, showing an increase of 25 per cent. in exports and of 74 per cent. in imports, and the balance of trade, which was favorable in 1918, has, as in the case of Japan, again become adverse.

RAILWAYS

Japan Has Powerful Locomotives.—Four locomotives of a more powerful type than any hitherto constructed in Japan have been built in the workshops of the Western Division of the Imperial Government Railways at Hamamatsu. They have 1,300 horsepower and a maximum speed of 66 miles an hour, while the previous record in Japan was 830 horsepower, with a maximum speed of 60 miles an hour. Under ordinary conditions they will pull a load of 350 tons at 30 miles an hour, the previous best speed with this load being 20 miles an hour.

Canton-Hankow Railway.—The Canton military government promises that the forced contribution of \$30,000 per month from the Kwangtung section of the Canton-Hankow Railway will be repaid.

S. M. R. Earnings.—The report of the South Manchuria Railroad Company for the term just ended, puts the gross receipts at Y.153,133,387,090, with the gross disbursements at Y.128,758,422,846, the balance, remaining Y.24,374,964,240, the net profit realized during the term.

The principal items of receipts are Y.67,060,720 for railroad revenue; Y.1,707,903 for steamer receipts; Y.6,069,883 for harbor dues; Y.61,200,547 for mining enterprises; Y.3,551,964 for industrial

revenue; Y.2,796,224 for receipts in iron foundries; Y.2,800,414 for electrical enterprises; Y.723,645 for general business revenue; Y.1,179,514 of hotel revenue; Y.3,446,140 local revenue; Y.1,654,690 interest from revenue deposited and Y.941,736 of miscellaneous receipts.

Shimonoseki Tunnel, Japan.—It is stated by a member of the Railway Board of the Imperial Japanese government that a commencement has been made with the survey work preparatory to the long contemplated plan of constructing a submarine railway tunnel between Shimonoseki and Moji. The survey is estimated to cost Y.1,800,000 (about £200,000), and will take about a year to complete. It is hoped that the tunnel will be opened to traffic within seven years, but under the present unsettled labor conditions, this estimate can be but vague.

As regards the details of this scheme, a correspondent states that, so as to avoid speculation in land, the government is silent, but it is believed that the descent of the tunnel will commence about a mile from the coast, and at first run under the narrow channel between the mainland and the little island of Hikoshima. It will run under this island, on which probably an underground station will be built, and then run under the actual straits of Shimonoseki as far as the Dairi district, a few miles to the west of Moji, where it will join the Kiushiu railway. It is estimated that the construction of the tunnel, which will be six miles in length, will cost 25 million yen.

Monorail Tramway, Tokyo.—With a view to relieving the congestion of traveling in Tokyo and as an auxiliary to the municipal electric-car service, several business men of the capital have approached the government for permission to build a monorail electric tramway over the rivers and canals in Tokyo. The scheme proposes to introduce cars capable of accommodating 50 persons and running at an average speed of about 25 miles per hour. The estimated cost is \$815,000 per mile and the proposed capital of the company is \$7,500,000.

Japan's Classification Society.—The Imperial Marine Association, or, in Japanese, Teikoku Kaiji Kyokai, is now approaching the completion of its organization. The association will work in close affiliation with the American Bureau of Shipping, the British Corporation, and the Registro Navale Italiano, each representing the others in its respective countries. The Japanese society is to adopt the regulations of the British Corporation, which are conceded to be superior to those of Lloyd's Register. At the present time, K. Minato, representing the Japanese government, is in the United States making a thorough study of the relations of the government to classification societies.

Ditching the "Deadwood."—The management of the Kwangtung Yueh-Han (Canton-Hankow) Railroad has reduced its employees by about fifty, in order to save from \$5,000 to \$6,000 a month, according to vernacular press reports. It is understood that the discharge of this number of men will not affect the efficiency of the road, as many of the discharged were superfluous officials who have done nothing for the company, only drawing salaries in return for political service rendered or because of their being relatives of those who are in high authority.

SHIPPING

New Canadian-Oriental Service.—The Canadian government has decided to open cargo boat service to India and the Far East consisting of three lines. One to run from the Pacific Coast to the Orient and Calcutta, a second to be operated on the Atlantic through the Mediterranean to India, Ceylon

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and the Strait Settlements, and a third line from the Atlantic seaboard to South Africa. At present the Canadian government is maintaining a steamer-service on another three lines, namely, between Atlantic ports and Europe, South America and the West Indies, a line from Vancouver to Australia, and a coastwise line. In addition to the proposed new service, the Canadian government is contemplating the inauguration of a passenger line between Pacific ports and Far Eastern ports.

American Bureau of Shipping.—The American Bureau of Shipping will establish its own exclusive surveyors in all of the principal ports of Europe.

This decision is in line with its policy of building up a world-wide machine for the handling of American ships. With the passage of the Jones bill, the American Bureau will be officially recognized by the government. Before the outbreak of the war, the American Bureau, while it had been founded for many years, was operating on a very small scale. It was built up as the Emergency Fleet Corporation got into its stride as a ship-building factor, and during 1919 supervised the construction of more than 3,000,000 deadweight tons of ships.

It has been recognized that one deficiency was the lack of its own surveyors at the various ports abroad. Therefore its officers determined to remedy this inadequacy by expanding. Recently the Shipping Board issued a bulletin to the managing agents advising them that the government owned vessels, in the future, would be classified by the American Bureau of Shipping, and that Lloyd's class would be dropped.

It is understood that the American classification society, which has as its president Stevenson Taylor, expects later to go into other fields. It will be represented in the ports of Japan by the newly organized Japanese Classification Bureau which has been started with the support of the government.

Dutch Shipping Merger (By The Associated Press).—Eight Dutch steamship companies have combined to form the United Dutch Navigation company, probably the largest combination since the formation of the International Mercantile Marine, and have announced the principal effort of the combination will be directed toward the opening of new lines to Australia, the Far East and Africa, and toward control of trade routes to North and South America. The new company is backed by a capital of 200,000,000 guilders. The combination includes the following companies: Holland-American Line, Royal Dutch Steamship Company, Netherlands Company, Java-China Line, Royal Packet Company, Rotterdam Lloyd Line, Maas Navigation Company and Vannevelt Goudraan Company of Rotterdam.

Motorship Development.—The East Asiatic Co., of Copenhagen, Denmark, the pioneer company in the operation of large Diesel ocean-going liners, once owned and operated 72,780 tons of steamships, but they have abandoned the use of these steam driven vessels in their oversea trade and are using the motorships exclusively for this purpose.

From the fact that the East Asiatic Company possesses a fleet of 15 motorships, totaling about 120,000 tons, and has contracted for a further 250,000 tons up to 14,000 tons each, it is evident that the Company has the greatest confidence in the motorship, and this is especially significant because of their original ownership of steamships.

Galveston-Orient Service.—A new steamship line with regular sailings from Galveston to Japan and other Far Eastern countries has been established under authority from the United States Shipping Board. S. Sgitovich & Co. will be the agents in Galveston for the new line, which will be known as the Gulf-Oriental Steamship Line. According to

announcement made by F. A. Lallier, manager for S. Sgitovich & Co., it is considered likely that regular sailings will begin about September 1. All vessels in this service will be routed through the Panama Canal. It is expected to carry full cargoes of cotton from Galveston to Japan, China and other Oriental countries. Cargoes from the Far East will be brought back to Galveston for shipment by rail to inland points of the United States. United States Shipping Board vessels will be allocated for this service, and should conditions warrant it it is said that the first sailing may be made before September.

Seattle-Java Service.—Inaugurating the new Seattle-Dutch East Indies service of the General Steamship Corporation, the steel freighter *Bondowoso* will load with flour for Java. She is a carrier of 10,000 tons deadweight capacity and is owned by the Java, China, Japan Steamship line.

Beginning with the *Bondowoso*, Seattle is to be a regular port of call for vessels of the Java, China, Japan Steamship line engaged in the Japan trade, the new General Steamship Corporation, made up of Pacific Coast shipping and financial men, being responsible for this new steamship service out of Seattle.

American Feeder Lines in Far East.—The use of the small 3,500 deadweight ton Shipping Board steamers in the Far East is meeting with success, according to Daulton Mann, vice-president of the Pacific Mail Steamship Company. As the result of the establishment of this network of services radiating from the express terminals the American flag ships are developing much on new business. To offset the advantages that the foreign lines have previously had through the practice of granting rebates to shippers the American interests have put into operation the system of charging off this percentage when the freights are paid.

The experiment of employing the small Great Lakes boats as feeders for the express liners has proved very successful. By virtue of their slight draft and their ability to enter the smaller ports, a considerable volume of freight is being developed for transshipment. The shippers in the Orient and the Far East seem to appreciate the new service very much.

Trawler for Japan.—The first British vessel to be bought by Japanese buyers for several years is the steel steam trawler *Diamond II*, 289 tons gross, built in 1913, which has been sold for about £22,500.

Australia's Wooden Ships.—According to a Reuter message from Sydney, the Hongkong Mercantile Company has offered to buy the Commonwealth's fleet of wooden steamers which were built in America. It is reported that the Commonwealth government is asking £85,000 for each steamer.

Pacific Coast Freight Rate Situation.—According to reports from the Pacific Coast, cancellations of space for Japan recently held back a number of shipments, the space being offered for quick loading at \$25, and in one instance at \$23. All shipping firms operating on the Pacific Coast are watching with considerable interest the movement of the Japanese mercantile marine, as reports state that 148 idle steamers are now lying in Japanese ports.

With a view to regulating freights and preventing rate cutting by competitors to the detriment of the national treasury, the northern division of the United States Shipping Board has been established at Seattle. The inauguration of such conferences is required by the terms of the new operators' agreement.

Japan's Floating Commercial Exposition.—Japan's exposition ship, which is to carry samples of Japanese products to be exhibited for three to seven days at each of the important ports in Korea,

China, the Philippines, Borneo, Sumatra, Java, India, and various countries in Europe and America, is the work of a jointstock Company organized, with a capital of ¥500,000, under the chairmanship of Dr. Kanasugi Eigero. The ship is one of the 10,000-ton class belonging to the Kokusai Kisen Kaisha and the exhibition will continue about ten months. The upper deck of the ship is to be thrown open to the public.

South China Tonnage.—Statistics of the vessels trading to the principal southern ports of China during the quarter ended in December 1919 show that at all the ports there was an increase in both vessels and tonnage. The number and tonnage of vessels entered and cleared at Foochow was 341 vessels of 252,173 tons which, compared with the corresponding quarter of 1918, shows an increase of 106 vessels and 84,362 tons. Details:

Flag	No.	Tonnage	% 1919	% 1918
American	18	17,946	7.5	0.2
British	40	54,418	21.4	37.1
Dutch	2	2,228	0.9	0.6
Japanese	74	57,291	22.6	26.6
Norwegian	4	2,232	—	—
Portuguese	—	—	1.0	0.2
Chinese	203	118,052	46.6	35.3

American tonnage at this port rose from 0.2 in 1918 to 7.5 last year. Japanese tonnage increased four per cent., British tonnage fell 15.7 per cent.

The number and tonnage of vessels entered and cleared at Amoy was 338 vessels of 421,736 tons, showing an increase of 48 vessels and 101,933 tons. Details:

Flag	No.	Tonnage	% 1919	% 1918
American	34	33,898	8.0	1.4
British	149	214,670	51.1	49.3
Dutch	16	38,542	9.1	5.3
Japanese	95	96,448	22.8	39.8
Portuguese	4	1,114	0.2	0.3
Chinese	40	37,064	8.8	3.9

The total number and tonnage of vessels entered and cleared at Swatow was 556 vessels of 643,932 tons, showing an increase of 128 vessels and 171,103 tons. Details:

Flag	No.	Tonnage	% 1919	% 1918
American	36	42,574	6.6	—
British	346	455,174	70.6	65.9
Dutch	12	19,946	3.1	2.3
French	4	2,664	0.4	—
Japanese	78	87,486	13.6	21.4
Norwegian	14	14,610	2.3	2.7
Portuguese	4	1,780	0.3	0.5
Chinese	42	19,698	3.1	7.2

The number and tonnage of vessels entered and cleared at Canton was 1,858 vessels of 982,169 tons, showing a decrease of 161 vessels and 224,168 tons. Details:

Flag	No.	Tonnage	% 1919	% 1918
American	97	15,851	1.6	1.5
British	927	732,222	74.5	75.2
Dutch	36	6,992	0.6	0.7
French	2	1,994	0.4	—
Japanese	83	36,704	3.7	4.3
Norwegian	7	7,199	0.7	—
Chinese	706	181,207	18.5	18.3

Fire on R. P. M. Steamer.—A fire occurred on the Royal Pacific Mail str. *Maetsuyckner*, while on her way from the Sunda Islands to Soerabaya, recently. The whole of the upper works of the ship were burnt away and 170 horses burned to death. The vessel's steering gear was interrupted, but the captain managed to enter the harbor of Laboan Hadji. One man and four children were drowned and nine persons were missing.

N. Y. K. Increase Rates.—The Nippon Yusen Kaisha has applied to the Japanese government for permission to increase freight rates on the subsidized European service line, 20 to 30 per cent., on the ground that the freights on the line continue to decrease in consequence of the general mercantile depression, while business expenses continue high.

Freight rates were twice raised during the war. But the recent business depression that is general throughout the world has so seriously affected shipping circles that another increase is, according to the company, inevitable.

Steamer Wrecked off Kamchatka Coast.—The Russian ship *Commodore Behring* stranded off the southern extremity of Kamchatka, en route from Vladivostok to Petropavlovsk, recently. She was so badly damaged that it was impossible to try to save her. Most of the crew seemed to have landed when a Japanese destroyer came alongside. At the request of the captain, the destroyers took on board the remaining 5 of the crew, which had numbered 31 and 23 passengers.

The Freight Agreement.—The "Jiji" comments as follows regarding the freight agreement and the Jones Act.—The sea freight agreement signed by twelve Japanese, British and American shipping companies, which was to be put in force from July 1, has fallen through, owing to the withdrawal from the convention of the British Blue Funnel Line, which set an example for three Japanese concerns to follow. This turn of affair in the matter is quite natural. With such agreement in force, the Japanese and British steamship companies will see the result of promoting at their own expense the business of American ship-owners, in view of the new American maritime protection act. The Anglo-Japanese ships have no choice but to abide by free competition to the last. On the other hand, the government subsidized shipping companies of Japan have no right, thinks the journal, to complain against America's unfair maritime act.

Dull Freight Market.—According to Japanese exchanges, the freight situation both on the ocean and coastal routes still continues dull. Particularly depressed are the Japanese coastal lines, the steamers engaged in the coastwise trade having practically no cargoes except coal. Consequently many cargo ships are idle in all Japanese ports. A large number of the middle sized vessels, however, have steamed for Kamchatka, Karafuto, and Hokkaido, owing to the abundant herring catches and other fish in those waters, where ships are needed to transport the catches.

The dull situation of the cargo movements has further affected the freight market, which is subject to frequent fluctuations. The current rate for the Yokohama-Moji run is quoted at Y.3, but the figure is merely nominal. The actual rates of the cargo boats *Taikiki Maru*, *Fukuura Maru* and *Ume Maru*, which carried large amounts of cod oil, fish cake and other goods between Kobe and Dairen were:

Vessel	Cargo	Route	Rate
Taikiki Maru	Oil cake	Dairen-Kobe	20
Fukuura Maru	Bean cake	Dairen-Kobe-Osaka	23
Ume Maru	Cod Oil	Dairen-Europe	700

N.Y.K. South American Route.—The shifting of the Japanese subsidy for steamer service to South America from the Nippon Yusen Kaisha steamers to the Osaka Shosen Kaisha vessels and the gradual inactivity in the South American trade, has changed the schedule for the N.Y.K. boats, who will hereafter discontinue their regular service.

Japanese Steamships on Service.—Investigation by the department of communications of Japan show the total number of Japanese merchantmen of 1,000 tons and above on various routes at the end of May as 779, with an aggregate tonnage of 2,603,028. Of these ships, 415 ships with an aggregate tonnage of 376,752 were on the coasting and near-sea routes, and 325 with 1,626,474 tons on ocean routes.

Increased Passage Rates.—Owing to the rise in working costs, passage rates of British steamship companies to India, Australia and the Far East have been increased to £46 to Port Said, £78 and £90 to Bombay and Karachi, £108 and £111 to Penang and Singapore, and £114 and £120 to Hongkong and Shanghai.

Opium Running at Manila.—The lure of profit still maintains the romance of the Far Eastern opium-runner. The Indo-China str. *Taisang's* arrival at Manila recently was more interesting than usual for the reason that the customs authorities practised on her some new smuggling prevention measures. Information was received about twelve days before that an American was on the *Taisang* and that upon arrival in Manila he was to be met by two other Americans to conduct an alleged opium deal. The vessel was met as she steamed into Manila Bay by a motor-boat guided by his alleged accomplice. The customs boat followed and after watching closely for six miles it was ascertained that none of the opium was dropped over the side. It is assumed that the motor-boat, which set out with the two Americans to receive the opium, did so not knowing the *Basilan* was following closely in the wake of the *Taisang*. The man aboard the vessel gave the occupants of the small craft the tip that they were being watched, with the result that none of the contraband was lowered over the side.

Far Eastern Activities of the Admiral Line.—As previously announced, the Admiral Line is considerably extending its Far Eastern activities. Mr. John J. Gorman, general agent for the Orient, looks for a steady increase of Oriental business. Mr. H. K. Laidlaw, up to the present agent at Yokohama, has taken charge of the Dairen branch, where he will be assisted by Mr. Edwin C. Wagstaff, who came out recently from the United States. Two regular monthly sailings have been opened between Dairen and European and American ports. The new office at Singapore is to be handled by Mr. E. B. Townsend, formerly of the Blue Funnel line. Mr. J. B. Armstrong, who was agent at Manila, has been transferred to the Yokohama office. Mr. Bruce, who was chief clerk at the Portland office, has been given charge of the Shanghai branch.

SHIPBUILDING

Oil Service Ship Launched at Kowloon.—A steel vessel, built to the order of the British Admiralty, was launched at Kowloon on June 30 from the yard of W. S. Bailey & Co., Ltd. She is 133-ft. long by 32-ft. beam by 10-ft. 3-in. depth, will carry 500 tons of oil in bulk, and act as a service vessel for bunkering the warships in the harbor. She is very strongly built and subdivided by oil-tight centre and transverse bulkheads, and equipped with a complete steam pumping plant for the rapid handling of oil fuel on the most modern system.

New Motor Vessels.—Three new motor vessels for the British India Steam Navigation Company, Ltd., of which two are being built by Messrs. Barclay, Curle & Co., Ltd., and a third by Messrs. Robert Duncan & Co., Ltd., are practically identical in dimensions with the *Dorsetshire*, being 450-ft. in length with a beam of 58-ft. and carrying 10,679 tons. Much higher-powered machinery is, however, being installed, comprising a couple of 2,330 i.h.p. eight cylinder sets built by the North British Diesel Engine Works, Ltd. One of these vessels will have a speed of 13½ knots while the others will maintain 12½ knots at sea. An exactly similar ship is under construction by Denny's Yard for the Union Steam Ship Company of New Zealand, Ltd., and it is anticipated that all of

these vessels will be completed before the end of the present year.

Shipbuilding, Far East.—During the three months January-March, 1920, there were building in China ten steel steamers with a gross tonnage of 35,325 and in Japan 68 steamers of a gross tonnage of 285,676. Other British Dominions in Asia, such as Hongkong and Singapore, will increase this tonnage by another 10,000 tons, making a total of 330,000 tons building in the Far East, or four and a half per cent. of the total tonnage under construction on all parts of the world.

New Canadian Steel Plate Mill.—Of interest to Far Eastern shipbuilding establishments is the opening of the ship plate mill of the Dominion Steel Corporation of Sydney, Nova Scotia. Construction of the mill, which cost about \$5,000,000, was commenced in June, 1918, but delayed owing to a revision of the contract under which the government agreed to take a large proportion of the output. The plates on inspection have proved equal to the highest standard of Lloyd's. The capacity of output is 12,000 tons per month and the government will take 50,000 tons per year of this for a term of five years at \$3.65 per 100 pounds. The product includes plates of iron from 3-16-in. to 2½-in. gauge, up to widths of 98-in. and lengths up to 80-ft., but the output will include other varieties of plates than those required for ship construction. The plates made for the government are shipped to the Halifax Shipyards (Ltd.). In 1919 Canada took nearly 40 per cent. of the exports of steel plates from the United States or 416,904,330 pounds out of a total of 1,590,428,647 pounds for the year. Japan was the only country exceeding this record.

MINES, MINERALS AND METALS

Prospecting in Kiangsi.—Some prospecting for coal and gold is being done in the Kanchow district of Kiangsi. A group of young Chinese, interested by a graduate of the mining school of Columbia university, have taken steps to develop what is reported to be a very likely coal mine. They are organizing to purchase American mining machinery through a Shanghai firm. Some gold has been found but not in commercial quantity.

Y.35 Coal.—Coal is being sold at Vladivostok at Y.35 per ton, at which price is thought to be extremely cheap. There are several railway cars laden with coal at the Vtoraya Rechka station near Vladivostok, brought there by the Czechs.

Labuan Bituminous Coal.—Two geologists sent out recently to investigate the Labuan island coal-fields, which Messrs. S. Pearson & Sons, Ltd., took over from the liquidator of the Labuan Coalfields Co., Ltd., report that there are abundant deposits of first-class bituminous coal, and that the acid-water difficulties met with by former lessees can be surmounted without difficulty or abnormal expense.

Gold Fields at Kamchatka.—A special expedition sent out by the Chutost Metallurgic Co-operative Society has reported the discovery of large gold-fields in the region of the Anadir River. Examination of the country contiguous to the tributaries of the Anadir also show that there are gold veins which give promise of yielding a fair proportion of the precious metal. The expedition is now making a close survey of the coast line, for a distance extending inland about 100 miles.

The Rajah's Mines.—The Rajah of Sarawak is contemplating the early sale of his coal mine at Brooketon (Brunei), which is less than 30 miles distant from Labuan. There are reports that a

prospective purchaser has already been found and that it is his intention to work the mine on a somewhat larger scale.

Asbestos Mining, China.—Asbestos is mined in Szechwan Province of China, from where it is shipped to Chungking at a cost of 75 cents per 100 pounds. In the Shensi Province there is said to be a good mine, and also one near Paotingfu, but the transportation is very poor. Several asbestos mines are located in the vicinity of Peking; the fibers are said to be very brittle and the product is used locally. Although Tientsin in recent years has developed an export trade in asbestos prepared from the native product by a Chinese concern. China imports considerable quantities of asbestos articles, such importations in 1918 being valued at \$148,837.

Shan States Development.—At a meeting of the China Society held in London on February 26 a paper was read by Captain Inman on the Burmese Shan States. He described the country as worthy of development. Silver and lead mines were in existence; the Southern Shan States Syndicate was carrying on mining operations in 1914. Teak wood was found in the Salween Valley. Further, there were the wood-oil, silk-cotton, and paper-mulberry trees, as well as the giant bamboo.

Sir Frederick Fryer paid a tribute to the work of the British frontier officers, whose lives were lonely, and, at first, were in constant peril from head-hunting savages, who greatly hindered railway construction.

The Yampi Sound Iron Deposits of Australia.—From time to time there have been stories current of enormous areas of iron ore at Yampi Sound, in northwestern Australia. Recently the State government dispatched expert mining engineers to examine them, and an exhaustive report has just been supplied by Mr. Montgomery, who estimates the amount of iron ore available—that is, in sight above sea level—at 97,000,000 tons. The larger quantities are on Koolan Island, where the lode rises 600-ft. above the water line; the lode is over 100-ft. wide, and is traced for nearly 4 miles, but really extends right through the island. On Cockatoo Island the height is 300-ft., the lode being 130-ft. wide, and running from end to end of the island.

The quality of the ore is exceptional. Assays show that the percentage of pure metallic iron runs from 60.91 to 68.99. There is only 1 per cent. of silica present and very little sulphur. These analyses compare favorably with the best-known iron deposits in the world. Newfoundland (Bell Island) ore is 51.80 per cent. metallic iron, with 9.50 per cent. silica. The French ores run to 57.28 per cent., the Cumberland (England), to 48.80, the Spanish (Bilbao) to 50.84, and the Algerian to a mean of about 50.

Yampi Sound is described as a splendid harbor and can be worked independently of the tides. The ore could be quarried, as Mr. Montgomery points out, and run down chutes by gravitation into the ships' holds, as there is deep water right up to the base of the deposits. The working of the iron deposits would undoubtedly lead to the development of the mineral resources of the adjacent country, such as copper, tin, and gold. Besides, Yampi Sound will become the base for the opening up of the 17,000,000 acres of fine pastoral lands in West Kimberley, now unoccupied and only waiting for the establishment of a port. It is certain that capital will be available for operating the iron deposits and the rest will follow.

—“Times Trade Supplement.”

Malay States Tin Mines.—American interests are reported to be looking into the Malay States tin mining prospects and several representatives of well-known American firms are now on the ground.

The map and reports summarized here are from *The Mining Magazine*, which says of Gopeng Consolidated that “this F.M.S. alluvial tin-mining proposition did not fare nearly so well in the twelve months ended September 30 last as in the preceding year. Not only was there a falling off in production and in the price of the metal, but costs were appreciably higher. The report of Osborne and Chappel, the general managers, shows that at 1,423,283 the number of cubic yards treated was about half a million less than before, and, although the recovery per cubic yard was slightly higher, the output was 836 tons of tin ore as against 937 tons in 1917-18. The costs of operating were nearly doubled, having been 26.02 cents (7½d.) as compared with 14.25 cents per cubic yard, while the average price obtained for concentrates was \$71.85 per picul (equal to £140. 16s. 6d. per ton) against \$87.74. The reduction of the yardage treated is attributed mainly to the lower levels being worked, and also to the exceptional drought during the last three months of the financial year, when water was very short. Allowing for the loss of £411 incurred on working the Ulu Gopeng property, the accounts for 1918-19 show a profit of £83,779, which contrasts with £135,011 for the previous year. Shareholders have received distributions amounting to 4s. per share which absorbed a total of £79,153.



At the Pahang Consolidated's tin mines, Willink's lode is the biggest producer, and the 900-ft. level is responding well to development. It is now announced that Nicholson's lode is also doing well. After being rather patchy on the 700-ft. level, it is proving of higher grade on the 800-ft. level. The latest report shows that the first 160-ft. of driving is in ore averaging 6 per cent. tin over 48 inches.

The Gopeng Consolidated continues to be worried with the question of tailings disposal, which greatly adds to the cost. In all probability the engineers have considered the advisability of treating the ground in some other way than by

hydraulicking. The yardage and output of tin concentrate, though still large, show a gradual decrease. During the past year this shrinkage was due partly to shortage of water and partly to the fact that lower levels were worked. These two items also suggest a possible variation in the method of treatment. In spite of the drawbacks mentioned, the property, being extensive, should be a dependable producer for many years.

There has been a boom in Melbourne in connection with the shares of the Badak syndicate, which owns alluvial tin ground at Jeneri in the State of Kedah, Federated Malay States. Mr. Orton, the manager, reported high results of bcores over 100 acres, the values varying from 4 to 34-lb per cubic yard. Mr. W. Wilson, a boring expert, was sent to investigate, and his cables so far have been of a confirmatory nature. Well-informed people, however, prefer to wait for the results of closer boring and the testing of a larger area, and they point to the serious discrepancy between bore assays and dredging results at other properties in this part of the Eastern tinfield, notably at Ronpibon Extended and Deebok.

A considerable reduction in profit in the year ended September 30 last was experienced by the Pengkalen company, the amount earned having been £8,878, as compared with £16,973 in 1917-18. Shareholders have received dividends of 12½ per cent. on the preference and 2½ per cent. on the ordinary shares, as against 15 and 5 per cent., respectively, for the preceding year. The suction-dredge production was only 15.53 tons of concentrate as compared with 97½ tons in the previous period, the dredge having been in operation for only 3 months. The general managers state that a certain amount of ground contiguous to the Kinta river still remains but can be included in the area to be worked by the bucket-dredge when installed. Since the close of the financial year under review the capital of the company has been increased to £200,000 to provide funds for dredging plant to work a new bucket-dredging area which has been acquired recently.

Rambutan, of the Wickett group of F.M.S. tin-mining companies, also experienced a falling off in production in its last financial year, while working costs were increased. The general managers' report for the twelve months ended June 30 last shows that the yardage treated was 502,812 (as compared with 505,700), the cost was 22.05 cents (against 16.90 cents) per cubic yard, and the average price realized for concentrates was £6 17s. 2d. per ton less than before. In the result the working profit from an output of 172 tons (against 242 tons) and including sundry revenue was £16,481 as compared with £29,327 for 1917-18. Dividends amounting to 2s. 8d. per share and absorbing £13,333 have been paid for 1918-19. The directors in their report point out that the opinion expressed by the general managers that “prospects for the current year are more encouraging” has been justified by the monthly output, which is very considerably in excess of that for 1918-19.

An output of 28 tons of tin concentrate was won by Chendai Consolidated from its mine in the year ended April 30, 1919, the directors' report for which period was issued only towards the end of April. This production represents a decrease of 9 tons on the year. The general managers' report shows that the mill worked only from May to October, 1918, and that there was a loss on working of £503. From the tribute workings, however, 77 tons of tin concentrate was won, from which the company received £1,804. Of this 77 tons, the Chendai section yielded all except nearly 9 tons, and the major part of the output was obtained from the lode-cap on the north-east side of the hill. The hydraulicking operations were carried down in places to the rock, and the ore-body disclosed, the general managers venture to forecast, “should prove a valuable asset when more development work is carried out.”

INDUSTRIAL

Chinese Red Ink.—A strong combine of Chinese firms in Hongkong, headed by Yuet Loong Chan & Co., controls the importation of "Soo Mook" wood from the Philippines; and makes the red ink or paste that up and down the Chinese Republic is used for inking the "chops," or seals, that the Chinese employ in affixing their signatures to documents of a formal nature. In Iloilo and other parts of the Philippines the tree is called the "cibucao," and it has its interest for Americans in that it provides also the dye which stains red the paper that the Chinese use to make the firecrackers that the American small boy has long been familiar with on the Fourth of July. Thus the tree, which is so little known to the world at large, gets rather amazingly distributed in the form of a dye, inking "chops" for China and coloring fire-crackers for the United States, as well as helping in coloring Chinese cloths and stationery. The wood is boiled to obtain the stain, and the process of extracting the dye is said to be crude and wasteful; but the syndicate is strong enough to regulate the output and price, nor is there any immediate likelihood that its monopoly will be taken away from it. Sooner or later, however, one may reasonably expect that conservation will observe the unnecessary wasteful Chinese way of obtaining the product, and raise the slogan, "Save the Soo Mook," for the process, it is said, could be much more economically conducted if the dye were extracted in the Philippines and exported to China.

Porcelain Industry at Nagoya.—One of the leading commission merchants in Nagoya says that future prospects in the industry are now regarded as extremely good. Not only are American customers placing larger orders than formerly, even at prices representing an advance of 250 per cent., but American agents for German houses are now coming to Japan for porcelain because of their inability to get supplies from Germany for their former American customers.

Manufacturers who have hitherto been reluctant to make firm quotations for future delivery are now definitely contracting on the basis of present prices, which they believe represent the maximum.

Japan Cancels Caustic Soda Contracts.—Caustic soda and soda ash, two of the leading chemical products, are in a decidedly uncomfortable position, particularly the former. Reports coming from Japan said orders totaling 1,000 tons had been cancelled and that eventually these would be thrown back on the market. The effect was not keenly felt in the New York market, strange as it may seem. Spot stocks there are extremely scarce and with the coal shortage, transportation difficulties and many other obstacles, it is not likely that there will be any material gain in stocks.

While these goods will undoubtedly be offered for resale here it is not expected that it will be done promptly. The freight rate from New York to San Francisco on caustic soda is 60c per 100 pounds, while from San Francisco to New York it is \$1.22 per 100 pounds. Thus sellers are unable to offer freely here, for the greatly increased freight rate would not permit undercutting of the price on the spot. Were it possible to obtain a cheaper freight rate, the seller would without hesitation offer the goods to protect himself.

American Woolens Position.—During 1919 the American Woolen Products Company, export agent and subsidiary of the American Woolen Company has maintained branch offices and representatives in the Argentine Republic, Brazil, Chihli, Colombia, Peru, Canada, Cuba, Mexico, Central America, Norway, Sweden, Denmark, Japan, China, Belgium, Spain, England, France, Holland, Hayti, Philippines and South Africa. We have been able, says the annual report, to increase our foreign deliveries for the year 1919 approximately 100 per

cent. Total deliveries amounting to about \$4,500,000, unfilled orders \$4,800,000, orders which we refused to accept \$13,000,000. The volume of foreign orders was so great that we were obliged to cancel many of them as your mills were unable to fill these orders on account of their sold-up condition or inability to manufacture for deliveries within the time required by customers.

Germany After Japan's Knit-Goods Markets.—Germany is preparing to supplant Japan in the South American knit-goods trade, such as: stockinette bloomers and blouses, bodices, boots and bootees, combination suits, divided skirts, gloves, hosiery for men, women and children in almost endless variety of yarn, combination and type; shirts, shawls, jackers, jerseys, sweaters, women's vests, men's fancy knitted wool waistcoats, etc.

The trade of South America, India, the Far East, and Australia has become the stronghold for Japanese goods during the war. German methods to secure the business away from Japan will no doubt develop itself through some system of advertising and credits. The Japanese have been sticklers for cash against documents.

Japan's Sugar Production.—The Department of Agriculture and Commerce in Tokyo has issued statistics of the production and consumption of sugar in Japan proper during the years 1917-18. In 1918 the output of the nine existing factories amounted to 424,017,000 *kin*, valued at Y.75,935,000, as compared with 390,704,000 *kin*, valued at Y.66,364,000 in 1917.

Japan, before the war, consumed annually 5,400,000 piculs, but her consumption at present averages 8,000,000 piculs (about 3,000,000 bastard, 2,400,000 piculs centrifugal and 2,600,000 piculs refined) yearly.

Exports are limited to refined sugar, sugar candy and a small quantity of sweetmeats, but these, particularly in the case of candy, are gradually increasing. In 1915, 1,165,000 piculs of refined sugar and 1,000 piculs of sugar candy were exported, these quantities increasing in 1917 to 2,209,000 piculs refined and 37,000 piculs candy. Exports for 1918 were 1,909,000 piculs refined and 50,000 piculs candy, and it has been estimated that those for 1919 amounted to 1,139,000 piculs refined and 44,000 piculs candy, the decrease being attributed to the boycott movements in China, which country receives the greater part of Japan's sugar exports. Shipments were made to England and France, however, and in this way the portion which was not taken by China was diverted into other channels.

In view of the fact that 70 per cent. of the total quantity of sugar consumed in China is imported from Japan, and that exports to that country are bound to increase as the consumption of sugar increases, it follows that the sugar refining industry in Japan is capable of further large development (1 *kin* equals 1,323 pounds avoirdupois; 1 picul equals 133½ pounds avoirdupois.)

Japan's Camphor Industry.—The effectiveness of the efforts of the Japanese camphor monopoly authorities for increased production is shown by the production of approximately 6,700,000 pounds during 1919, of which about 5,700,000 pounds came from Formosa, the total being almost double the amount produced in 1918, but being still 20 per cent. below the maximum production attained in 1916, according to "Commerce Reports." To protect the requirements of the rapidly growing celluloid industry of Japan definite amounts to the various foreign countries, the allotment to the United States for 1919 being only 1,420,000 pounds, whereas before the war this country imported about 2,500,000 pounds annually from Japan.

Java Sugar Workers Ask 100 Per Cent. Raise.—A general strike is threatened by the workers in

Java sugar factories, who are demanding increase in wages amounting to 100 per cent. The employers are trying to effect a reasonable settlement.

Chengchow Has New Cotton Mill.—The Yu Foong Cotton Mill has opened at Changchow, Honan, with 10,000 spindles. When extensions are completed, it will have 50,000 spindles and 1,200 looms, providing employment for 4,500 workers. Messrs. Andersen, Meyer & Co. supplied the machinery.

Japanese Dyers Seek Protection.—A bill is pending in the Japanese Diet to amend the customs tariff so as to provide protection for the dyers. Of late, in Japan, the market for dyes has been dull owing to the general depression.

The dye industry made rapid strides during the war and had advanced to such a stage of development that in a great many cases foreign imports were entirely dispensed with.

The price of aniline dyes, which were quoted at Y.3.90 per pound in the latter part of last January, slumped to Y.1.30 in the middle of June. There are 11 large dyeing factories in Osaka, the largest being the Japan Dyeing Company, and 6 of them have temporarily closed, the rest having curtailed their business since last April.

American Tobacco Factory for Philippines.—The Liggett and Myers Tobacco company, the largest tobacco manufacturers in the United States, will shortly open a temporary tobacco factory in Manila for the manufacture of Philippine cigarettes. If the factory succeeds, a bigger and permanent factory, costing several million dollars, will be erected.

Big Chinese Industrial Co.—A big industrial development company is now under formation in North China. Over 50 high officials and prominent merchants are interested in the proposition. The company will be called the North China Farming and Stock-raising Corporation with a total capitalization of \$500,000. It is being organized under the direction of Chin Shun-cho, proprietor of the Oriental Hotel in Peking.

Chinese Tramways Meet H. C. L.—In view of the increasing cost of living the Chinese Tramway Company at Shanghai has given its employees a substantial increase of salary. Members of the office staff get an increase of \$2; inspectors, motormen, and conductors \$1; and ordinary laborers 4 copper cents a day.

Japanese Steel Market Weak.—The tone of the Japanese steel market is depressed and the prices have taken a downward movement quite recently owing to the scarcity of demands, the current quotations for bar steel are ruling at Y.6, plain steel (square), is being quoted at Y.7, thick plates at Y.6.50 and thin plates at Y.10.50. The stock in the market is accordingly increasing, about 100,000 tons of American goods previously contracted for arriving here since last month. Exportation to India, the South Sea islands and China may be possible in the future, but the depreciation of silver quotations and the disadvantageous exchange rates check the growth of exports in those directions at present. The American steel imported here is quoted higher than Japanese products, the price of American bar steel being about Y.260 per ton for Yokohama delivery, which shows a disparity of about Y.100 over the figure for domestic manufacture, while the imported goods are of excellent quality and cannot be treated on the same level with that of Japanese manufacture.

Japanese Canning Factory in California.—Japanese capitalists are planning to invest their money in California on the theory that it will promote a more friendly feeling between the two countries. The initial step is the organization of a large canning factory in California, which would absorb the

products of Japanese farms in that State. The canned products would be exported to Japan.

A special representative is now in Japan to present proposals to Japanese capitalists for industrial investments for the benefit of their fellow countrymen overseas. The proposition has won the interest of prominent Japanese capitalists, and it is said that a commission is shortly to be sent to the United States with authority to negotiate.

The establishment of a Japanese-American bank in San Francisco and later the exportation of California rice to Japan are part of the plans.

Vegetable Oil Industry, Harbin.—There are 25 vegetable oil mills in the vicinity of Harbin which consume annually about 250,000 long tons of the estimated 800,000 tons of soya beans produced in the Harbin consular district and make 20,000 long tons of oil. The rest of the bean output is exported through the firms regularly engaged in export trade. There are no refineries in the district, but it is possible that one may be erected in the near future. The production of hemp seed approximates 20,000 long tons annually, very little of which is crushed in the local mills. In the various villages scattered throughout the Maritime Province, there have always been small bean-oil mills, very primitive in construction and operated for the most part by Chinese. But there were not sufficient beans grown there to keep these small mills going, and it was necessary to import beans from Manchuria. In the entire Province there is only one large mill. It belongs to the firm of Skidelsky and is located at Nikolsk-Ussurisk. Owing to political and social unrest and disorder, this large plant, together with practically all the smaller ones, are at present idle.

New Philippine Ironworks.—Catton, Neill & Company of Honolulu has acquired about 100 acres on the Manila waterfront on which the company plans the establishment of an iron works and shipyards. This property is in what is known as the North Harbor, just beyond the Tondo district.

New White Lead Works, Australia.—Manufacturers of white lead, colors, and varnishes in the Hull district (the centre of the greatest activity in these lines in Great Britain) are much interested in the formation of the British-Australasian Lead Manufacturers' Proprietary (Ltd.), which is erecting extensive works in Australia for the production of white lead. From information given out there it seems that land has been purchased on the Parramatta River, where it is designed to work up into manufactured products a portion of the Broken Hill pig lead which is now exported. The company also purposes giving attention to the manufacture of prepared paints, dry colors, varnishes—in fact, the whole requirements of the oil and color trade except the crushing of linseed. In 1913 Australia's imports of these goods were valued at \$2,968,500 and in 1917-18 at \$2,058,500; but local (Australian) production in 1917 reached a value of \$1,017,100 and since then white lead has enormously advanced in price, so that the total Australian trade would now be not far short of \$7,300,000. Almost every corroder in Great Britain is financially interested in the new company.

New Cotton Mills, China.—The two new Chinese cotton mills being organized in the Lower Yangtze are the Yu Chung Mill at Wuhu, and Hua Fund Mill at Kiukiang. The former has 10,000 spindles, and part of the mill is now in operation. The Kiukiang mill started with a capital of \$2,000,000, and has ordered 15,000 spindles.

Several merchants are making plans to open a big cotton mill in Canton. The proposed mill is to be modelled after the Chinese-owned cotton mills in Haiphong, with a total capital of £5,000,000, to be subscribed jointly by the seventy-two guilds merchants in Canton and the Chinese overseas mer-

chants. The cotton mill will be known as "Tai Chung Hua Cotton Mill."

Spinning Mill at Weihui, Honan.—In view of the abundant production of cotton in Honan, local Chinese have decided to establish a cotton-spinning mill at Weihui. The site has already been purchased, and an order for machinery has been sent to England, to be probably received in the autumn. The promoters further intend to establish a society to study the cotton industry and methods of improving the native cotton. It is understood that cotton seeds will either be imported from America, or brought from Shensi and Tanshan, and be distributed among the cotton growers of the province, so that the local cotton can be improved and used for the manufacture of finer grades of cotton yarn.

Match Industry, Japan.—During recent years the match industry has made large progress. Its present production is estimated at about 50 million gross a year, of which more than 80 p.c. are exported abroad. In 1918 the exports of matches reached a total value of nearly ¥40 million, of which about half went to India and China, but of late they have found a large sale also in the United States of America as well as nearer home. It may be remarked that matches are one of the articles particularly suited to the industrial conditions prevailing in that country.

Wool Plant in China.—A recent announcement in the Far Eastern press states that a group of Osaka business men, most of whom are connected with the textile industry in Japan, are planning to float a new wool company for operation in China. The new company, according to the present plan, will be capitalized at ¥10,000,000 and the factories will be located in China. It is expected that the promoters will buy up a textile company at Wuchang, China, enlarge the mill and use it for the manufacture of woollen goods exclusively.

Brick-Making Machinery, Dairen.—The present shortage in Dairen of suitable buildings for commercial offices is accentuated by the insufficiency of bricks and the consequent high prices, which were, in March, about 50 per cent. higher than the previous July. Of the 50,000,000 bricks produced annually in Dairen: some 30,000,000 are machine made and 20,000,000 made by hand. In an attempt to meet a portion of the local demand, which is estimated at 200,000,000 a year, one contractor has recently purchased brick-making machinery to the value of \$230,000, having a capacity of 2,000 bricks per hour.

Japanese Cement Market.—In view of the prospects of an increased demand to meet the needs of the extensive construction of factories and other buildings, speculators have been buying up all the available stocks, which were not large, since manufacturers generally disposed of their output the latter part of 1919, at from \$3.49 to \$3.98 a barrel. A sudden rise in price to about \$7 a barrel was the result. The present annual production is estimated at from 6,000,000 to 7,000,000 barrels.

Japanese Mousseline Manufacturers to Make By-Products.—The mousseline manufacturers in Japan are planning a by-product business such as the manufacture of cotton yarn, silk yarn, cotton satin, etc., reports Consul General George H. Scidmore. This move is mainly attributed to the continued enforcement by the British authorities since the war of the restrictions on the shipment of wool and other materials necessary to the industry. Since 1914 the price of mousseline has risen from 14 cents a yard to 85 cents, while the output has fallen from 70,000,000 yards to 50,000,000 yards a year.

Japan to Cut Siberian Lumber.—The Japanese are preparing to cut seriously into the lumber traffic between the Pacific coast and the Orient. The Japanese have large quantities of sawmill and lumbering machinery which they will throw into the forests of Siberia as soon as that country is tranquil enough to allow industrial undertakings. With cheap labor and shorter freight routes they will cut so far beneath the prices of North American product that there will be no chance in the open market for lumber from the west coast, says a report from Vancouver.

Tea-Drying Machinery.—Machines for tea drying are generally constructed in such a way that it is difficult to insulate the heater pipes sufficiently to prevent a wastage of fuel. Among the suggestions for remedying this in a paper read recently before the Junior Institution of Engineers, Dibrugarh, Assam, India, were the total inclosure of the machinery in such a way as to reduce the loss of heat to the minimum; the continuation to the ground level of the side casing, which is at present brought only about three-fourths of the way down, feeding the air from below, and the double casing throughout of all drying machines, filling the intervening spaces with some good heat-insulating material, such as asbestos.

Oil Mill Plants, China.—Approximately 81,000,000 pounds of groundnut oil were exported from Tsingtao in 1918. Of this amount more than 32,000,000 pounds were shipped to the United States.

The discovery of the utilization of groundnut oil as a substitute for olive oil in manufacturing soap and for mixing with olive oil to increase its flavor, gave the trade a tremendous impetus, while the recent discovery that the nut, after baking, makes a good substitute for coffee and for mixing with chocolate and cocoa, and as an ingredient in biscuit making, provided another reason for increased exportation.

Several large Japanese firms have established themselves at Tsingtao and equipped wharves for the handling of the oil. One Japanese firm has a fleet of vessels employed almost exclusively in carrying this oil. At Seattle special wharves with storage tanks were also built for receiving the oil and for transferring it to tank cars.

Until recently the oil has been extracted from the nuts by primitive Chinese methods. One Japanese company, with mills at Chinpie, Kiaochow, Kalchang and Newchwang, is now experimenting with the new method of extracting the oil by means of power presses. If this method proves successful there will undoubtedly develop a considerable demand for presses of this type. It will undoubtedly take some little time to educate the Chinese to the advantage of using modern methods in extracting the oil, but once it is accomplished the market for oil extracting machinery will be almost unlimited, as many other vegetable oils are produced in the country.

Nanyang Tobacco Enterprise.—The largest shipment of tobacco and machinery for cigarette making in China that has ever passed through the San Francisco port has been arranged for this year by Sat Hing Kan, the cigarette king of China, says the San Francisco Bulletin.

Kan has just bought in the East \$8,000,000 of Virginia tobacco, which will be shipped in 12,000 hogsheads. He has also bought \$1,500,000 worth of cigarette-making machinery.

Last year his shipments of tobacco through the San Francisco port were valued at \$6,000,000.

The Nanyang cigarette plants in Hongkong and Shanghai employ 12,000 operators and produce annually seven billion cigarettes.

Feminine Corporation, Seoul.—Korean women are forming an exclusively feminine corporation, capitalized at ¥4,000,000, to buy and sell "clothing."

lingerie and toilet accessories," says an advertisement in the first issue of the new Korean daily, the "Chosen Ilpo."

None of the capital stock, divided into 20,000 shares, will be sold to any man. The enterprise is regarded by many as a move to break down an ancient Korean tradition.

The director and all other officials of the company, it is announced, will be women, and in addition to merchandise the company will have a sewing department. Its aim is "the promotion of the comfort of living and improvement of Korean women in economic knowledge and experience."

Cotton Mills, Japan.—Japan, in 1917, had 250 cotton mills, with 3,100,000 spindles, employing 134,000 operators. These mills had a capital of ¥111,888,000. The orders already in British machinists' hands are estimated to be at least 2,000,000 spindles, though it is believed to be difficult to ship more than 500,000 spindles this year and, as it is estimated that 500,000 spindles included in American orders may reach Japan during 1920, it is estimated that Japan will add, this year, at least 1,000,000 spindles to her present spindleage.

COMMERCIAL

Increased Exports of Japanese Goods to U.S.

The financial crisis in Japan, together with the effect of the Chinese boycott, was in a large measure responsible for the decrease of imports into the United States of \$50,000,000 during the month of April, officials of the Bureau of Foreign and Domestic Commerce state. The decreased prices, however, which came about as the result of the credit stringency, will have the effect, officials feel, of largely increasing exports from Japan to the United States.

The most serious effect of this decrease in imports, it is stated, is that it will check any stabilization of currency brought about by the decrease in exports from the United States, which amounted to \$150,000,000.

Officials note with interest that during the month of April, exports from Europe increased rather than decreased. The major decrease in exports to the United States were from Cuba, South America, Japan, and India.

Far East Paraffin Trade.—There is considerable movement of paraffin into and out of Hongkong. Imports in 1919 are placed at 7,741,466 pounds, valued at \$792,211, as compared with imports of 8,742,533 pounds, valued at \$1,102,057, in 1918. Exports of the wax in 1919 amounted to 7,683,000 pounds, valued at \$827,439, as compared with exports of 5,222,800 pounds, valued at \$66,959 in 1918.

China is the best customer of Hongkong in this trade, although Hongkong stocks of waxes are exported to many parts of the world. Of the exports for 1919, for example, China took 49 per cent., the Philippines 16 per cent., South American countries 22 per cent.

Spirits of turpentine to the value of \$10,438,334 was exported from the United States during the calendar year 1919. Rosin valued at \$20,433,970 and tar, turpentine and pitch valued at \$551,793 were shipped during the same period.

Chinese Lard Exports.—The following table shows the quantity and value of lard exported from China between 1913 and 1919:—

	Piculs.	Hk. Tls.
1913	75,586	1,011,780
1914	73,684	942,246
1915	85,395	1,138,964
1916	96,035	1,265,430
1917	158,141	2,482,099
1918	119,810	1,844,043
1919	317,520	4,833,127

Soda Ash, Japan.—In 1915, Japan imported 24,116,000 pounds of caustic soda and 68,094,000 pounds of soda ash, 80,119,000 pounds of caustic soda and 119,139,000 pounds of soda ash were imported in 1919, 70 to 80 per cent. of which came from the United States.

Morgans for Japan.—Dr. Issa Tanimura, Commissioner of Live Stock for the Japanese government, has just purchased several Morgan horses for the Japanese imperial household. To celebrate the event and to show their appreciation of this important recognition of the native American breed the members of the Morgan Horse Club gave a banquet at Delmonico's on the evening of Wednesday, June 2, in honor of Dr. Tanimura.

Tientsin Exports to U.S.—Shipments invoiced at the American consulate at Tientsin, China, for the United States advanced from a value of \$29,890,600 in 1918 to \$41,000,671 during the past year. Sheep's wool, amounting to \$14,341,073 in 1913 and \$9,514,258 in 1919, was the principal item.

Japan Using U. S. Thread.—An investigation of the market for cotton thread, made by Consul H. F. Hawley, reveals the interesting fact that about 40 per cent. of the thread used in the Nagoya district was imported from the United States, the rest being of Japanese manufacture.

It was said that although the imported variety was higher in price, costing from ¥2.10 to ¥2.90 per dozen tubes of 200 yards each, while the local make was priced at from 1.50 to ¥2 per dozen, the imported had the more ready sale owing to its superiority. Due to delays in receiving supplies from America the stocks were so low by the middle of March that an early rise in price was anticipated.

Japanese Request Names.—A communication has been received at the Philadelphia Chamber of Commerce from the Japanese Chamber of Commerce in San Francisco stating that they are now receiving a large number of inquiries from merchants and manufacturers in Japan concerning American markets, and a request is made for the names of large firms dealing in buttons and brushes.

Sino-Japanese Silk.—Japanese silk reelers are being urged in Japanese trade journals to arrange for the formation of a "Sino-Japanese Silk Alliance." They are being advised to take the lead in "combining Japanese, American and Chinese capital with their experience and technique to improve and develop the silk industry of China."

Japan's Trade with Russia.—According to official returns Japanese exports to and imports from European Russia for the month of April amounted to ¥130,656 and ¥43,853 respectively. Exports to and imports from Asiatic Russia during the same month amounted to ¥1,125,966 and ¥374,594 respectively. In the trade with Asiatic Russia, Japanese exports represented a vast decline of ¥6,577,062 as against the same month last year but imports showed an increase of ¥66,801.

Chinese Furs for America.—Messrs. Funsten Brothers & Co., operators of the International Fur Exchange of St. Louis, Missouri, have opened a branch office in Tientsin, and propose to purchase large quantities of furs for shipment to the United States. The International Fur Exchange is the largest selling organization for the disposal of raw and cured furs in the world, drawing from every fur producing centre. The February sale of the exchange totaled more than \$22,000,000.

Japan's Trade with Argentina.—Japan's export trade with Argentina rose from \$1,000,000 before the war to \$10,000,000 in 1918, says the bulletin

of the United States Chamber of Commerce at Buenos Aires.

Establishment of two direct Japanese steamship lines and opening of branches and agencies of Japanese commercial concerns, with a branch of the Yokohama Specie Bank and a Japanese chamber of commerce, are noted.

A considerable part of Japan's trade, the bulletin says, consists of typical oriental products, but much of it is in goods "which will compete with those of European and American manufacturers."

Among the latter are cotton and silk textiles, pure silk, silk cloth, cotton yarns, dyed fabric, pencils, tin plate, china ware, copper ware, buttons, brushes and fountain.

American Floating Exhibit.—The First American Foreign Trade Floating Exposition, Inc., has been formed, and in October will send out a steamship with exhibits of American goods which will touch at most of the principal ports of South America and the Orient. The project has the indorsement of the American Manufacturers' Export Association and other organizations interested in the development of America's foreign trade.

The United States Shipping Board has signified its willingness to provide the vessel, on which more than 300 manufacturers and exporters are expected to exhibit their products. The new corporation expects to announce its arrangements within the next two weeks. The company opened headquarters at 50 Broad Street, New York.

The need for a floating exposition of American goods is said to have been emphasized by the fact that both England and Japan have adopted this method of competing for foreign trade.

Matting Imports, U. S.—Imports of Japanese and Chinese matting into the U.S. amount to 11,800,000 yards for eight months preceding March 1, or forty per cent. more than for the same period a year earlier.

Japanese U.S. Tea Exports.—Tea shipments from Japan to the United States for the present season, which began early in May, were estimated at about 55,000 tons, by the growers before the season actually began, calculation being based on exports made during the previous season. The result so far has proved very unsatisfactory, and the quantity shipped up to the present amount to only 15,000 tons. The total shipment for the season are not expected to exceed 35,000 tons, which will mean a decrease of approximately 20,000 tons as compared with the previous season.

Japan's Excess Supply of Wheat Flour.—In view of the gravity of the food problem in Japan, the authorities put some restrictions on the export of wheat and wheat flour in 1918 and at the same time abolished or reduced import dues on cereals. The measure has naturally accelerated the import of wheat. The total imports of wheat and wheat flour during 1919 amounted to 1,891,000 koku and 65,018,000 kin respectively. Import of the cargo is steadily on the increase and wheat imported into Japan from January to April amounted to 635,000 koku and wheat flour 15,216,000 kin. On the other hand, the milling industry is being carried on so prosperously that the market is burdened with a supply greatly exceeding the home demand. It is feared on the part of flour mill owners that the excess supply might cause retrogression of the industry in Japan, if the restriction on exports is left unchanged.

Japanese Exports of Cotton Yarn.—The Japanese Cotton Spinners' Association report the volume of cotton yarns exported during the second decade of June amounted to 4,380.5 bales representing a decrease of 688 bales as against the same period of May. Compared with the corresponding period

of last year, the figures also show a decline of 1,222.5 bales. The government is helping the trade in its endeavor to dispose of the accumulated cargo by the simplification of processes for the grant of permits.

Mitsubishi Company Makes Tea Exports.—The shipping department of the Mitsubishi company has made a new departure by opening a service in the line of tea shipments to the United States, which has formerly been maintained by several Japanese and foreign steamship companies running steamer service on the Pacific, mostly American.

The Mitsubishi shipping department intends to fit out a few more steamers exclusively for the shipment of tea during the present season.

Japan's Trade with Vladivostok.—Trade at Vladivostok is still in a paralyzed condition, says the "Herald of Asia," due to the incomplete number of warehouses and imperfect loading and unloading facilities. Since May last, the situation has become more critical, through the recent stringent money circulation. All trade has stopped except for small quantities necessary for daily use. Further inactivity is expected during the summer when the trade situation generally becomes very slack as a rule. The number of steamships which entered and cleared the port during the past three months and the volume of exports and imports of Vladivostok for the same period are as follows:—

	Ships entered	Ships cleared	Imports tons	Exports tons
March	54	37	369,113	98,917
April	48	34	317,708	137,484
May	25	35	390,909	434,334

Principal exports from Japan to Siberia are sugar, grain, fish, beef and salt, while the principal exports from the Russian port are destined for Japan, Shanghai, Tsingtao, and India, and exports to India mainly consist of medicine, beef, and pigs' bristles.

Japan Re-Exports Chilean Nitrates.—Large Japanese imports of Chilean nitrate has caused the Japan Fertilizer Merchants Guild to ask for permission for its re-exportation. This permission has been granted by the Department of Agriculture and Commerce, while permits have also been issued to export saltpeter of ammonium to the extent not exceeding an amount that would affect the market prices in Japan. The export of Chilean nitrates has been limited to 30,000 tons. A large portion of the imported goods has already been shipped to foreign markets and another shipment amounting to 2,500 tons has been contracted for as a third re-exportation through the hands of the American Trading Company and the Mitsui Bussan Company. More shipments are expected to be made shortly.

Direct Trade with Indo-China.—Gaston Giraud, commercial attache in the United States of Indo-China, has made several addresses on the trade possibilities which are awaiting American merchants in the French colonial possession of the Far East, which has a population of 16,000,000 people and an area of 280,000 square miles. "We in Indo-China," said Mr. Giraud, "need among other things American automobiles, machinery of all kinds, flour, glassware, drugs and manufactured garments, and we produce pepper and all kinds of spices, ores and other minerals, including coal; and also rubber, fibre and rice. We have available for export every year 1,300,000 tons of rice, while Japan does not raise enough rice even for its own population. Direct steamship connection with the Pacific Coast is desired, to do away with the trans-shipping of goods at Shanghai and at Japanese and other Chinese ports, which adds to the costs of the goods we buy and sell. There is no reason why steamers sailing from Pacific Coast ports for the Far East should not carry goods

direct to the Indo-Chinese ports of Saigon and Haiphong." Mr. Giraud said that during the last ten months, Pacific Mail Steamship Company steamers have made Saigon and Haiphong ports of call, and the officers of the company at San Francisco state that they are more than satisfied with the amount of business carried to and from Indo-China.

Chinese Australia Trade.—As a result of the investigation in China of a representative of Australian business interests, who recently returned to Melbourne, arrangements are being made, according to the "Age," to export large quantities of foodstuffs, iron and leather to China.

South Seas Trade.—The Japanese have not only captured the German trade in the South Pacific Islands, according to press reports, but also have almost completely superseded the British, who formerly did a business there worth over £200,000 a year. It is said that every article on sale in the Marshall Islands is of Japanese manufacture, ranging from needles to anchors, biscuits to sewing machines, jewelry to all classes of European wearing apparel, all adapted to please the native tastes.

Falling Prices in Japan.—The prices of commodities in Japan show a further decline. The only articles that are not coming down are sugar and coal. Local fluctuations will be inevitable and will depend on the strength or otherwise of the demand made at different seasons. It is generally thought that the present reduced prices will continue for some time to come.

The following table shows the gradual decline in prices:

Commodities	January Yen	April Yen	May Yen
Rice	54	31	50
Beans	29	24	20
Wheat	6	5	5
Sugar	49	48	54
Sauce	120	115	95
Eggs	49	41	37
Raw Silk	3691	2857	1741
Cotton Yarn	571	606	418
Imitation Nankeen	1½	1½	1½
Calico	29	27	23
Coal	250	250	250

Japan Short of Sugar.—Sugar stocks in warehouses throughout Japan, which had been increasing since about the end of February, have begun to show a decrease. The increase in the exports of Japan's sugar supply to foreign markets, where a severe sugar shortage is being felt and where large profits are realized on sugar deals, has been the cause of the shortage there, which in May began to be noticeable. The stock in all warehouses on June 15 stood at 4,223,083 bales, showing a decrease of 2,245,940 bales compared with the quantity on hand at the end of May. Stock of new sugar on June 15 amounted to 2,070,397 bales and that of the old sugar was 357,274 bales, being decreases of 109,219 and 58,709 bales respectively compared with figures of May 31. The decided falling off in the figures attests to the brisk trade with America and Europe in sugar shipments.

Successful Philippine Exhibit.—According to M. J. de la Rama, manager of the Philippine commercial agency at San Francisco, the Philippine exhibit at the seventh national foreign trade convention was a complete success. Over 2,500 delegates attended from all parts of the United States and insular products came in for much useful attention. Mr. de la Rama believes that interest has been quickened in the possibilities of Philippine industry.

Japan and South America.—To stimulate Japanese interest in South America which, both from

the fact that they have huge amounts of the raw materials that Japan needs for her industries and because the Latin American states of South America are considered ideal for Japanese immigration, the Japan-Latin American Association is holding an exhibition to introduce the industrial, topographical and general conditions of South America to the Japanese public. "There is a marked absence of proper knowledge on the part of the people of this country with regard to South America," declares Mr. Ishiguro, the director of the exhibition. "This accounts for the comparative activity of the Japanese in securing products from the South American states. The present exhibition, it is hoped, will rouse the Japanese to realize the advantage to trade and industry that will follow a closer knowledge of the conditions prevalent in those countries whose natural resources are well nigh inexhaustible." The exhibits from the Argentine Republic lead, and number one thousand. Peru comes next with 119 exhibits. Among the exhibits from Brazil are films depicting scenes and customs. The exhibits consist principally of furs, woollen textiles, agricultural products, lumber samples. Among the exhibits that of the Hoshi Drugs Company, which has a branch in Brazil, and the South American Immigration Association are exhibiting are various poisonous serpents and four-fingered, black-eyed apes. South American exhibition was held in Japan seven years ago, but the present one is of a far greater extent.

Trade at Wuchow and Nanning.—Mr. S. Wyatt-Smith, until recently H.M. Consul at Wuchow, where he was stationed for 18 months, and previous to that at Tsinanfu, Shantung, is at present in England on leave. He states that trade at Wuchow and Nanning is in the hands of the Chinese with the exception of the Asiatic Petroleum Company's and British-American Tobacco Company's interests. Imports of piece-goods are fairly plentiful, and are made through Chinese merchants at Hongkong. The Chinese have as yet not much use for other Western manufactured goods. Wuchow was recently equipped with an electric-light plant, and the contract for the machinery was obtained in China by an American merchant firm on behalf of American manufacturers. Regarding a recent report from Chinese sources in a British newspaper in China that the city of Wuchow is to be reconstructed and supplied with roads, tramways, and other Western improvements, Mr. Wyatt-Smith did not think that anything very important would develop yet awhile. Nanning, however, will probably be equipped with waterworks in the near future. There is a fairly good trade in the export of native produce from Kwangsi, but this also is in the hands of Chinese merchants, and it is thought that a British merchant firm opening a branch at Wuchow or Nanning would meet with obstacles promoted by the local Chinese merchants.

Japanese-Philippine Trade.—Trade between the Philippine Islands and Japan has shown a gradual falling off since the signing of the armistice and the return of commercial transactions between Europe and the United States. Commerce between Japan and the islands attained sudden development during the war period, and in 1918 the value of the trade reached its highest mark, the figures for exports and imports being about 13 per cent. of the total value of the foreign trade of the Philippines, as against 6 per cent. in pre-war days. The last official reports issued show that both imports and exports are gradually waning, the volume of the trade in 1919 being only about 7 per cent.

American Trade with Japan Dull.—The trade between Japan and the United States is gradually becoming dull, making cargo movements very inactive. Japanese ships plying between Japanese

and American ports are carrying very limited cargoes on both inward and outward trips, especially on the former. On the outward trips, the situation has, to some effect, improved slightly owing to the increase in the exportation of miscellaneous goods. The dull shipments on the homeward voyages is mainly due to the cancellation of orders previously contracted for by Japanese importers, who had to resort to such methods through the financial depression and the consequent stringent money situation.

AGRICULTURAL

Bumper Philippine Yield.—Final figures announced by the bureau of agriculture of the Philippines show that in the 1919 calendar year the total production of the Islands of rice, copra, sugar, hemp, corn and tobacco amounted to P.458,083,988, exceeding by P.108,000,000 the 1918 production. The substantial rise in the prices of the products explains the increase to some extent.

Promising Rice Harvest.—The southern rice crop now being harvested is reported to be well over the average. Rain has been abundant and owing to the high price of rice and the scarcity of money, the acreage planted is above the ordinary.

Good Formosa Sugar Crop.—A considerable decrease was anticipated for the season's yield of Formosa sugar because of the great storm of last August, which wrought extensive damage to the cane throughout the insular territory. Unfavorable weather conditions were prevalent following the storm. The estimations for the total yield were made, originally, at 4,200,000 piculs of centrifugals ("bunmitsu" sugar), and 500,000 piculs of brown sugar, it being generally believed that the yield of centrifugals would dwindle to some amount like 3,200,000 piculs. The situation, however, improved owing to the turn for the better of weather conditions, and the final result has proved unexpectedly satisfying. According to the statements sent in the government general by the sugar refineries throughout the island, the total crop for the year is estimated at about 3,520,000 piculs of centrifugals and 220,000 piculs of brown sugar, or a total yield of 3,740,000 piculs.

New Sugar Plantations in the East Indies.—Japanese capitalists are devoting considerable attention to the production of sugar in the Netherland East Indies and elsewhere in the South Seas. The Nittaka Sugar Company recently increased its capital of Y.5,000,000 to Y.10,000,000, one of the objects being to engage in the cultivation of sugar, rubber and copra in Java. The Taiwan Sugar Manufacturing Company, the largest in the island, is reported to be now contemplating the establishment of a branch office at Rangoon in order to carry on sugar and rubber production. Probably the most important development in this direction is the formation of a company to be known as the Japanese and Foreign Sugar Manufacturing Company, Ltd. (Naigai Seito Kabushiki Kaisha), with an authorized capital of Y.10,000,000.

Japan Experimenting with Sheep.—An expert of the Japanese department of agriculture and commerce is at present on a mission to Australia with the object of purchasing from stud stock 200 Shropshire ewes and 50 Corriedale ewes for export to Japan. The expert stated that the stud sheep were being purchased with a view to raising flocks in Japan which has only 4,000 to 5,000 sheep of mixed breeds, mostly Shropshire, but with a few Merinos. It is stated that for some time the Japanese government has been importing rams from England, and that experiments in breeding would be continued with the Australian sheep now being purchased.

AUTOS, MOTOR TRUCKS AND TRACTORS

Motor Fire Engines for Canton.—Canton will soon have modern fire apparatus. At a meeting of representative citizens and officials, it was decided that \$30,000 be appropriated at once by the Canton Fire Protective Association to procure two motor fire engines immediately.

Automobile Imports, Hongkong.—The import and export records for Hongkong show that in 1919 motor-cars were imported to the value of \$493,574, of which \$429,480 came direct from the United States. Of the balance a considerable amount came from the United States by way of the Philippines and North China, and the remainder represents the casual movement of cars into the colony from various parts of the world as brought with their owners. During the year the colony exported cars to the value of \$171,996, of which \$64,064 went to Canton, \$45,972 to Indo-China, and the rest to the East Indies, Straits Settlements, and in the casual movement of cars about the world by their owners.

Motor Trucks, Singapore.—Motor trucks are gaining popularity in Singapore for the conveyance of plantation rubber and other merchandise from wharves to stores or from one godown to another. Sales made at the weekly rubber auctions held by the Chamber of Commerce, involving nearly 1,000 tons on each occasion, are subject to the condition that delivery be made within two days, which makes auto trucks almost necessary since a bullock cart, which travels only about 3 miles per hour, can only load about a ton of rubber and, furthermore, is subject to considerable pilfering in transit. Every firm of rubber merchants owns at least one motor truck, and the increasing volume of rubber business, the growing use of trucks for conveying metals from the quarries, and an increased demand for trucks in the hinterland should make Singapore a better market for auto trucks, there already being over 300 motor trucks in operation in British Malaya.

China a Market for Trucks.—President F. A. Seiberling of the Goodyear Tire and Rubber company has great faith in China as a future market for trucks. He believes that the thousands of miles of post roads built centuries ago by the Manchus, paved with blocks of stone from three to five feet long and ten to twelve inches thick, will make splendid foundations for modern hard surfaced roads.

In a recent speech he declared that within the lives of his auditors thousands of motor-cars will be running in Chinese roads.

Dunlop Ricksha Tires.—The Shanghai Chamber of Commerce recently compiled a report on the Jinricksha Tyre Trade in that important city which obtained publicity in some of our contemporaries. The report is not entirely accurate, stating, as it does, that the Dunlop Rubber Company (Far East), Ltd., has been ousted from this trade by Japanese competition. The facts are that the Shanghai market is kept supplied largely by the output of the Dunlop Company's factory in Japan. The Dunlop Company has never, so far as we know, attempted to supply the Chinese market from any other source than its Japanese factory, which was established in 1908. It is interesting to note that in 1912 the Continental Caoutchouc and Gutta-Percha Company made a bid to obtain a share in the market.

ROADS AND HIGHWAYS

Road Building, Japan.—The Osaka municipal government has announced a programme of street paving and widening which will extend over a

period of ten years and involve an estimated expenditure of nearly \$65,000,000. American surfacing material will be used. A boulevard two miles long and 125 feet wide is included.

About a year ago, a vigorous good roads campaign was started in Japan. Lantern slides and printed matter were sent from the United States. The most influential men in the country became interested, and many people supposed that much was being accomplished. The publicity material was shelved, however, and energy slackened, and highway improvements will be at a standstill for another period. A few cities and towns have streets and roads for passenger hauling, but in 90 per cent. of these places unsatisfactory bridge conditions destroy the value of the highways. The government allows a total of 3,000 pounds for motor vehicles; this, with the fact that an average 2-ton truck complete with body weighs about 5,800 pounds, absolutely rules out the use of motor transportation for passengers or freight. The roads are very narrow, so much so that in many places they are not wide enough for two machines to pass. Close to the cities the roads have a greater width, and two trucks can pass without scraping mudguards. The city streets that are favorable for automobiles are very few. In Tokio the majority of streets most used are from 18 to 20 feet wide. There are no sidewalks, and the congestion is annoying. The Japanese have not become accustomed to a right-or-left rule for the road, and, as a matter of fact, use the middle of the roadway. The average road is about 20 feet wide and has no trolley cars or sidewalks, and the telephone posts are located every few yards about 3 feet from the building line. It is felt that the only future for the business of Japan is in new roads. There is hope that vast improvements will materialize within the next year or two as a result of the visit of a commission of Japanese engineers sent to the United States to make a thorough study of road administration, construction and maintenance.

Kweiyang-Pektsengho Motor Road.—Chow Linru, governor of Kweichow, is taking steps to lay a modern motor road from Kweiyang to Pektsengho. Later, the road will be extended.

Roads of the World.—A writer in the "Journal-Chronicle" of London says:

"The highest road in the world is Main street in Denver, Col.; the richest road is Fifth avenue, in New York City; the widest is Market street, in Philadelphia, and the shortest is Rue Ble, in Paris; Tchangsti, in Nankin, China, is the dirtiest; Via Castle in Seville, Spain, is the cleanest; the most aristocratic is Grosvenor place, London; the most beautiful is the Avenue des Champs-Elysees, Paris; the narrowest is the Via Sol, in Havana, Cuba, with a width of 42 inches, while the oldest is the Appian Way, built by Julius Caesar in the days of the Romans and still in good repair.

CONSTRUCTION

Roofing Materials, Sumatra.—The modern style private house in Medan is constructed of cement, which material is fast replacing wood for building. With the advent of cement houses, stone shingles are becoming very popular, as they are easy to place in position, being interlocking and requiring no cement.

The wood shingle, or sirap, a British Indian product, is also popular, especially at Brastagi, where the winds probably would not admit of the free use of some shingles. The wooden shingles are first soaked in a preparation in order to make them water tight. On the estate stap roofing is used extensively, as it is considered very serviceable, and likewise cheap. On garages, small manufacturing plants, etc., corrugated iron or tar paper is used, but only in a temporary way.

Improvements, Bangkok.—Commercial firms desiring to acquire offices or building sites in Bangkok may be interested in the announcement concerning the projected development of a section of land in the business centre of the city, having advantageous river frontage. The plans provide for the construction, of ferroconcrete, of 28 godowns, with offices above, separated by roadway; 16 feet wide, to facilitate the handling of merchandise. A road 32 feet wide will be constructed along the river bank, with pontoons and wharfage accommodations. The cost is estimated at about a million dollars.

Building Material, Hongkong.—A continued strong demand in Hongkong for all kinds of building materials is noted by Consul General George H. Anderson. In the face of the rising prices and a tendency to more extended deliveries, which make business difficult, importers are said to be endeavoring to place large orders for iron and steel products, including hardware, with a view to obtaining what they can as soon as possible. The special demand is for plates, bars and rods. Nails are in fair demand, and tin plate is selling with no change in price or in time of delivery.

AVIATION

New Japanese Aviation School.—Construction work on the Akenoga-hara branch, Miye prefecture, of the Military Aviation School, Tokorozawa, is making speedy progress and the construction will be completed in November.

The students of this branch school will specialize in the art of bombdropping and in anti-aircraft.

Prospecting by Plane.—For the first time in the history of the Philippines, a big army De Havilland plane, piloted by Lieutenant Maxwell of the Camp Stotsenburg air service, was used recently by Chief Engineer Piontkowski of the Manila Railroad company in a brief scouting trip over the proposed extension of the railroad to Cagayan. The two men left Camp Stotsenburg and proceeded to Cabanatuan, thence to the Rio Grande valley through the valleys of Pantabangan, Avitan and Carranglan rivers, and thence to the Caraballo pass.

Straits Aerial Mail.—The first aerial mail between Kuala-Lumpur and Singapore was carried on June 29. Capt. Carroll, flying a Nighthawk machine which has now been purchased by Mr. C. F. F. Wearne, left the federal capital at 1.30 and landed on the Racecourse at Singapore before 3.45, thus doing the journey in less than two hours and a quarter.

Norman Thompson Seaplane in Japan.—The first flight of the Norman Thompson seaplane in Japan was made on July 5 from Tokyo to Yokohama. Without any previous announcement, Mr. Frank Kirby with Mr. Carter Tiffany as his passenger came out of the water at Shibaura at 4.30 p.m. in their flying boat and in a short time the pair were taking in the various events that went to make up the celebration of Independence Day. They flew over the golf field and the tennis courts and had a look at the boat races in the bay. For a time they manoeuvred around the bay and then started back for Tokyo.

Manila Welcomes Chinese Birdmen.—The Chinese aircraft students who recently accompanied Major J. E. H. Stevenot to Manila, P.I., to take a course of instruction at the Curtiss ground school at Paranaque, have been given a hearty welcome. Lieutenant Commander Wong Shao-fung, in charge of the party, told the *Philippines Free Press*:

"We selected the Curtiss school in this city because it is the only one of its kind in the Far East. I believe that the Curtiss Aeroplane com-

pany is the biggest manufacturer of aeroplanes and the fact that it is a Curtiss machine (the NC-4) which first crossed the Atlantic led us to have our young men instructed by a Curtiss school. Our government is continually sending out young men to specialize in the different branches of study, to America most of them, because we believe that America and her government are the kind best adapted to the condition of my country."

U.S. Government Hangars, P.I.—One of the important works being accomplished by our government in the Philippines is that of the aerial branch of the War Department. The department is spending \$2,500,000, chiefly at Corregidor and Stotsenburg. Hangars, quarters, sheds and landing places for seaplanes are being put in and everything is being done on a large and substantial scale.

ELECTRIC LIGHT AND POWER

Electric Enterprise in Japan.—The number of companies undertaking electric operations throughout Japan is stated to be 756 with an aggregate capital of ¥1,134,744,173, showing a decrease of 7 in the number of concerns and of ¥5,030,000 in capital, as compared with the previous month. Electric power generated by such companies equalled 1,275,420 kilos during May, 942,414 kilos being generated by water power and 332,006 kilos by steam.

Westinghouse in the Orient.—Mr. E. M. Herr, president of the Westinghouse Electric and Manufacturing Company, accompanied by Mr. Loyall A. Osborne, president of the Western Improvement Company and vice-president of the Westinghouse Electric and Manufacturing Company, is at present touring the Orient, investigating conditions with a view to a largely increased export trade in the products of the Westinghouse Company. During the last two years the sales of these products in China and Japan have been very large and the present trip of the executives is for the purpose of determining whether it is advisable at this time to establish additional branch agencies or possibly branch manufacturing plants of the Westinghouse Electric and Manufacturing Company at central locations in Japan and China. Through their Japan agents, Messrs. Takata & Co., many important Westinghouse plants have been erected, while their agents, Gaston, Williams & Wigmore, have been very active.

TELEGRAPHS AND TELEPHONES

Dairen and Nagasaki Cable.—Another means of direct communication between Manchuria and Japan is being provided for in the laying of a new cable between Dairen and Nagasaki. The purchase of materials, laying of the cable, and other work in connection thereto will be conducted by the Imperial Japanese Department of Communications, which will also bear all expenses for repairs and upkeep, but all expenses for the laying thereof is to be borne by the South Manchurian Railway Co., with the provision that the Japanese government shall pay the railway company 7 per cent. per annum on the amount so expended for as long a period as the government shall continue to use the cable. The cost of the undertaking is estimated at \$1,350,000. The project is expected to be completed in March, 1921, the materials having been already ordered from England for delivery by November, 1920.

Telephone Service, Canton.—There has been considerable talk of establishing telephone systems in Fatshan, Kongmoon, Wuchang, and other cities in the Canton consular district, reports Consul Leo

Bergholz, but nothing has as yet been done. So far Canton's magneto system is the only one installed in the district, with the exception of the private lines of the Sunning & Canton Samshui Railway. As it has been some time since the equipment was installed the service is reported as not being entirely satisfactory to the some 1,700 subscribers.

Telephones, Sumatra.—Practically the entire Sumatra east coast is covered by the magneto telephone system of Medan, which has about 12,000 miles of wires and 14 central stations in addition to those in Medan. Long-distance calls constitute about 50 per cent. of the calls made.

Canton Telephone Exchange.—As Mr. Ha Yui, the director of the Canton Telephone Exchange, has found that conditions in the central telephone office are beyond improvement and the wires of the telephones are badly out of order, he has tendered his resignation. The civil governor, however, has repeatedly asked him to maintain his present office.

British Imperial Wireless.—The British Imperial Wireless Telegraphy committee recommends a scheme for connecting the various parts of the Empire by wireless links, not exceeding 2,000 miles in length. The committee believes that, by this procedure, official, commercial and press traffic would be carried reliably, expeditiously and economically and essential strategic needs would be met. The estimates for the initial capital cost of the scheme is £1,243,000 and the annual charges, including interest and amortization £425,000. Traffic would produce a revenue of £325,000, leaving an annual loss of £100,000. The Committee recommends that the execution of the scheme be entrusted to the engineering department of the Post Office, but that long-distance wireless traffic with foreign countries might be left to commercial companies.

BRIDGE AND STRUCTURAL STEEL

Japan-Canada Steel Orders.—A large order for rods and bars has been secured from the Japanese government by the Dominion Steel Corporation, Ottawa, which will keep the rod and bar mill in operation for a long time to come.

Large Steel Contract.—The Barde Steel Products Company has been incorporated under the laws of the State of Delaware. This enterprise has been organized by M. Barde & Sons, steel, iron and machinery merchants of Portland, Oregon. They have been in this line of business for the past twenty-five years and are considered to be the largest iron merchants on the west coast. At the present time the Barde Steel Products Corporation owns between 350,000 and 500,000 tons of steel, consisting of plates, shapes and bars of all descriptions, etc., which were recently purchased from the United States Shipping Board. The value of this contract runs up to about \$30,000,000. It has also been stated that the same concern is negotiating for an additional large quantity of steel. Mr. L. Baron, formerly manager of the engineering and chemical department of J. Aron & Company, Inc., was appointed general export manager of this new corporation. Mr. Baron has been recognized in the export business for the past fifteen years, and has traveled extensively over Europe, including Russia, and the Orient, and has made very good connections in the foreign countries.

Iron and Steel Works, China.—The British-American Mining Company, in which the Mining Corporation of Canada has a 45 per cent. interest, has been studying the possibility of establishing an iron and steel industry in China, which would involve the purchase of coalfields there. Changes in

the political situation in the Far East may bear on the final decision, and the consulting engineer notes that "certain unfavorable factors may lessen the attractiveness of this venture."

PUBLIC WORKS

Government Construction Work in Burma, 1918-19.—According to the official report for the year ending March 31, 1919, the amount spent in Burma for public works, excluding navigation, canals, irrigation, and protective embankments, was approximately \$3,990,000, as against \$4,250,000 in 1917-18, and \$4,074,000 in 1916-17. While the expenditures for public buildings and for miscellaneous public improvements were considerably less than in the previous year, the amount spent for roads was considerably larger, 1,972 miles of "metalled" roads and 10,570 miles of "unmetalled" roads being maintained, as against 1,920 and 10,340 miles, respectively, in the preceding year.

RIVER AND HARBOR IMPROVEMENTS

Singapore Harbor Improvement.—Enlargement of the docks at Singapore is contemplated. At present there is a shortage of godown accommodation especially at Tanjong Pagar, where the wharves and godowns are packed with goods which consignees do not remove. Accommodation at the wharves and godowns is taxed to its utmost and the next returns of the Harbor Board promise to establish a record in regard to tonnage arriving and the amount of cargo handled.

EDUCATIONAL

Baptists to Establish Schools in China.—Only one of every 350 women in China can read or write, and because it is on the women of this vast country that missionaries hope to build a permanent foundation for Christianity, the North Baptists have initiated a movement to overcome this illiteracy. It was announced by the Northern Baptist Convention that as a beginning arrangements had been perfected for the establishment of five thoroughly equipped high schools for girls at the most important Baptist mission stations. There are three Baptist mission divisions in China, and it also was announced that ultimately a complete school system would be established, with instructors, who are now being trained for the special work they will have to undertake. The purpose is to organize a corps of instructors comprising Christianized Chinese men and women who have been educated in American colleges. The Northern Baptists now have 265 schools in China, with an enrollment of more than 8,000 students.

Chair for Nanking University.—Boston University plans to establish a chair of business administration in the University of Nanking, China. All departments of the university have been enlisted to aid in creating a fund of \$3,000 for this purpose.

Medical Missionaries.—An appeal has been issued by the Interchurch World Movement for volunteer physicians for five years' service in Asiatic countries. General practitioners and specialists are desired for service in Turkey, India, China, Japan, Syria, Palestine, Siam, Persia, Indo-China, Malaysia, Philippine Islands, and in Africa. It is announced that more than six hundred physicians are needed. A salary of \$3,000 and a home is offered for married physicians and \$2,000 for single physicians. All travelling expenses are paid by the organization.

Baptist's Program.—As part of the new world movement for which northern Baptists plan to raise \$100,000,000, a program of cooperation with the China Medical Missionary Association and the Rockefeller Institute has been mapped out.

MISCELLANEOUS

Bandits on Sungari.—The Russian volunteer fleet steamer *Orel* was fired on by Hungtutze on the River Sungari on July 3. After wounding four men and damaging the boat, the Hungtutze boarded her and robbed the passengers. They then made off with their plunder.

To Combat Profiteers.—Because they allege that rice retailers in the city are buying Saigon rice at low prices and reselling them by the ganta at maximum government prices, the municipal board of Manila is appropriating P.100,000 to buy rice from Saigon to be resold in the city at cost plus transportation.

Another Form of Boycott.—Retaliation has been resorted to by the Bachelors' club, an organization of young Filipinos, in order "to get back at" Mr. Pitt for his present propaganda in the United States in behalf of postponing any discussion by congress of Philippine independence for 25 years. At a recent meeting the members of the club drew up resolutions pledging themselves not to drink any "Isuan" beverages—Mr. Pitt being understood to be the chief stockholder in the company which manufactures them—for a period of "twenty-five years."

Japan's Naval Program.—Addressing the House of Representatives Budget Committee on July 13, the Minister of the Navy stated that Japan's building capacity was two capital ships yearly. The naval programme was not directed against any potential enemy but was dictated by the insular position of Japan, although the possibility of the despatch of a foreign force to the Orient had not been disregarded. The present Budget provided for the building of four dreadnoughts, four battle-cruisers, twelve cruisers and other smaller craft and totalled Y.680,000,000.

Foreigners in Japan.—According to the latest official statistics, the following number of foreigners are residing in Japan: 12,869 Chinese, 2,314 Britons, 1,904 Americans, 583 Germans, 440 French, 1,150 Russians, 336 Indians, 218 Portuguese, 437 Swiss, 118 Dutch, 92 Danes, 63 Swedes, 33 Norwegians, 80 Italians, 40 Austro-Hungarians, 55 Spanish, 32 Belgians, 8 Rumanians, 12 Turks, 253 other nationals, altogether 20,740 beside 3,777 tourists.

Japanese in California.—The California State Board of Control has filed a report with Governor Stephen, according to which the Japanese population in California increased by 111 per cent. between 1910 and 1918, the Hindu population increased by 33½ per cent. while the Whites increased by only 8½ per cent. The Chinese population decreased from 72,423 in 1890 to 33,271 in 1919.

Free Entry?—Apparently some one with knowledge of the movements of the party of Chinese students who arrived in Manila, recently, to study aviation, and who knew beforehand of the probability of their getting the freedom of the port, thought to use them as a means of smuggling in some opium. Suspicion was directed to a suitcase bearing the tag of Lieutenant Commander Wong, in charge of the party. It was very heavy and different in make from the rest of his baggage. In it were found 67 tins of opium valued at P.25,000. Commander Wong disclaimed all knowledge of the suitcase, though he admitted it bore

his name. Under the circumstances, and the Chinese consul general vouching for Commander Wong, no arrests were made. The matter is now being thoroughly investigated.

Cantonese Olympian.—Lee Ming Tak, a chief clerk in the office of the Canton Superintendent of Public Instruction, and a leading promoter of athletics in Canton, will represent Canton at the coming International Olympic Games, at Antwerp this month as a visiting delegate.

Japanese Banker's Death.—Mr. Kiyojiro Morioka, a well-known banker and Member of Parliament, committed suicide at Nara on June 27 by cutting his throat with a short sword. The failure of his bank appears to have been the cause of the tragedy. The "Osaka Asahi" describes the banker's death as a "magnificent suicide."

\$45,000 for Murder.—The Peking Cabinet has approved General Chang Ching-yao's suggestion that he should offer to pay \$45,000 compensation to the family of the Rev. W. Reimert, an American Missionary who was recently murdered by the northern soldiers. General Chang Ching-yao added that a soldier of the 11th Division had confessed to the murder, whereupon he was summarily executed. General Chang takes upon himself the responsibility for the murder and is attempting to smooth over the situation.

Philippine Independence a Counter-Campaign.—Senate President Quezon declares that Resident Commissioner de Veyra and the Philippine press bureau at Washington are going to start a counter-campaign in the United States to negative the effects of the efforts of Harold M. Pitt, who is canvassing the chambers of commerce of the United States to enlist sentiment in favor of setting aside the consideration of Philippine independence for 25 years.

The "Deadly" Cigarette.—According to the "Canton Times," the students in Canton will soon form an anti-cigarette society, among themselves first, and later on one for everybody. The students will first advise all schools to influence their students not to smoke, then ask members of their families to stop the tobacco habit. They will later organize anti-cigarette societies everywhere and have squads out to lecture against smoking.

North China's "Business Bible."—The North-China Desk Hong List, published by *The North-China Daily News*, might be called the Shanghai and North-China business man's bible. The supplement for July, 1920, has just been issued and, as usual, it is right up to date and error-proof. The supplement, this time, is particularly timely because owing to the increased number of firms the demand for the latest previous regular edition has made a clean sweep of all copies in the hands of the printers and booksellers.

PERSONAL

At the Helm.—Mr. Horace Beeson and Mr. A. Jones are in charge of Gaston, Williams and Wigmore's office during Mr. Boulon's absence and Mr. E. L. McClosky is in full charge of the Gaston, Williams and Wigmore Electrical Engineering Corporation.

Garry Gets Wen-Hu.—Mr. C. F. Garry of the China Merchants' S.N. Co., Hankow, has received from Peking the 7th order of the Wen-Hu decoration in recognition of his service.

Dr. Kuo Declines.—Dr. P. W. Kuo, president of the Nanking Teachers' College, has declined the offer to become the president of the Tsinghua College, Peking.

Ambassador to Rome.—Mr. Kentaro Ochiai, the Japanese minister to the Hague, has been appointed as the Japanese ambassador to Rome.

Josiah Conder Dead.—The death has occurred in Tokyo from paralysis, at the age of 68 years, of Mr. Josiah Conder, architect, a British resident in Tokyo for forty years. Mr. Conder's wife died the week before. Mr. Conder was prominently identified with activities, in Japan, especially freemasonry, the Overseas league, etc.

American-Asiatic Underwriters.—Mr. Edwin Albert Rowe, representing the American-Asiatic Underwriters, has opened offices at 15 Nanking Road.

The Late G. M. Wheelock.—Mr. Geoffrey Manlius Wheelock, whose death is reported at Boston, Mass., following upon an attack of pleurisy was 41 years of age. He was born in Shanghai and was a son of the late Mr. T. R. Wheelock, who died in Shanghai in January of this year. Mr. Geoffrey Wheelock was taken to the United States when he was five years of age and received his education there, finishing at Harvard. On returning to Shanghai, he joined his father in business and became a partner in the firm of Wheelock & Co., agents for the Shanghai Tug & Lighter Co., Ltd., and afterwards became a director of the latter company resigning his position last year. He was also a director of other local Companies.

Japan Decorates Westinghouse Officials.—The Emperor of Japan has decorated with the Order of the Rising Sun E. M. Herr, of Pittsburg, president of the Westinghouse Electric and Manufacturing Co., and L. A. Osborne, of New York, president of the Westinghouse Electric International Co. who have been in Japan for several

months studying Oriental industrial conditions. The company they represent always has had close relations with Japan has supplied that country with a great deal of power machinery. It also has undertaken the training of a number of Japanese students at its works. The Order of the Rising Sun is the highest honor the Emperor can bestow. Mr. Herr received the third class and Mr. Osborne the fourth, the higher classes being awarded only to Japanese national heroes.

NEXT TO THE SKIN

How Did He?—The "piano for sale by a lady with mahogany legs" has been beaten by an advertisement in a recent issue of the "Post," in which an unfurnished room and board (Hongkong side preferred) is sought "by a young bachelor with Portuguese family." How did he get it?—"Hongkong China Mail."

If "Topper," why not "Squasher?" "Must I wear a topper (silk hat) at the race?" the Prince of Wales rather plaintively asked when the Australian programme for his entertainment was gone over with him upon the warship *Renown* just prior to his reaching New Zealand. "Yes, that will be necessary," he was told by one of his staff. "But what does the Governor-General wear at Fleming-

ton"? (Melbourne's race course) the Prince hopefully asked. "A top hat," was the reply "Well, may I wear a squash hat at the (agricultural) show?" the Prince remonstrated. "Certainly," he was told.

Chinese Name Customs.—Chinese parents are afraid to give their children the fine high-sounding names their love suggests, lest the evil spirits, of whom they stand in constant fear, should come to understand how precious they are, and cause them some calamity, says the "San Francisco Chronicle." So the little ones are called by such names as Little Stupid, and the like, the idea being that when the spirits hear the children called by such uncomplimentary names they will imagine that the parents care very little for them, and will not take the trouble to molest them.

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This pressure is equivalent to shearing 32 square inches metal at each stroke of the machine.		
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Number of strokes per minute	18
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WEIGHT OF MULTIPLE PUNCH	140,000 lbs.
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This Punch is of the double housing, central ram type. The sliding ram is fitted with two separate sets of punching tools, in order to permit the punching of lines of holes across the plate which are not in line with each other. Punch is equipped with 48 sets of adjustable punching tools, adjustable down to 2 1/4" center to center and controlled by eight levers, four levers for each row of punching tools. Spacing Table is the Thomas Automatic Electrically Operated Table. Machine is brand new, never having been set up and is available immediately. Further particulars can be obtained from

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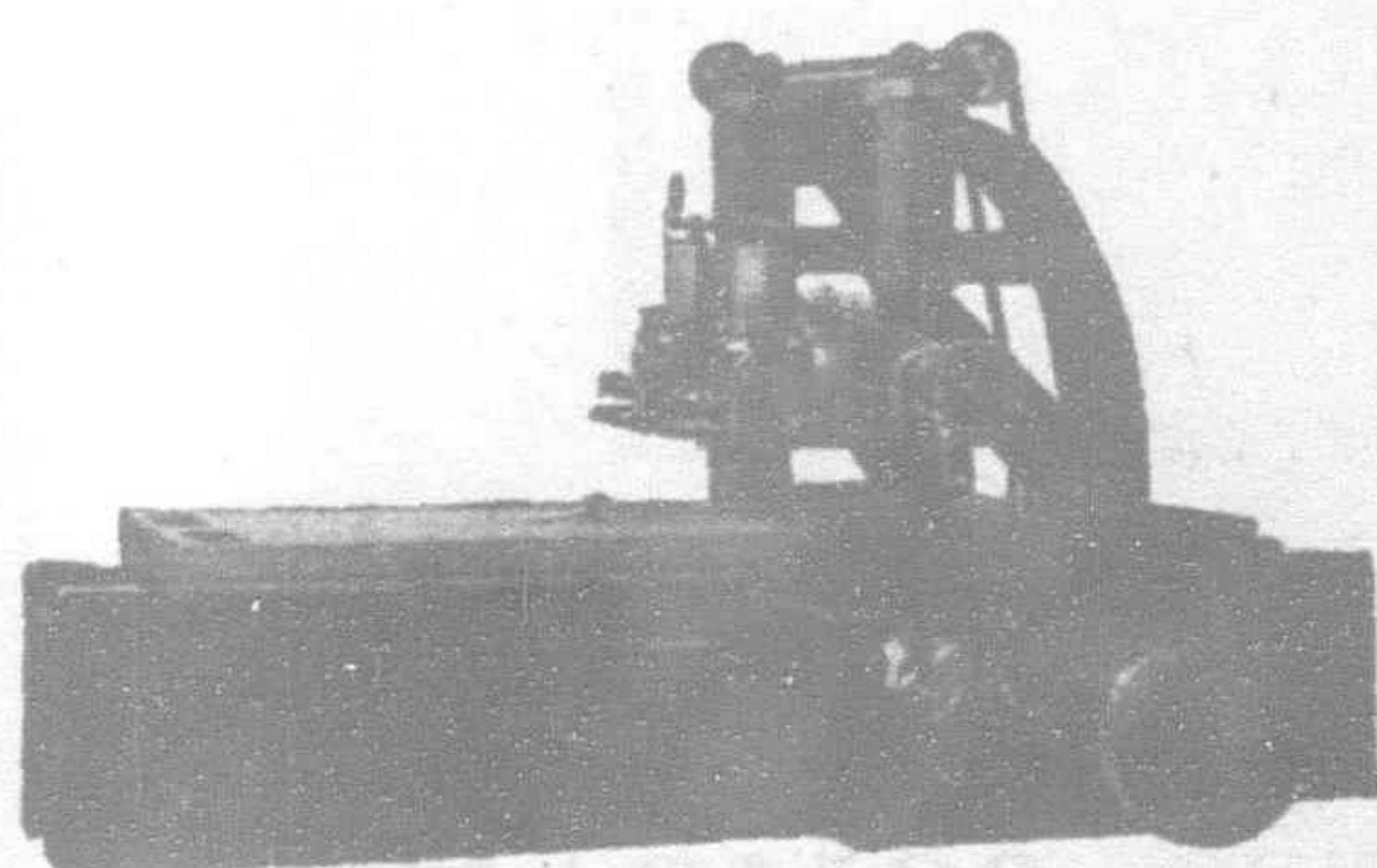
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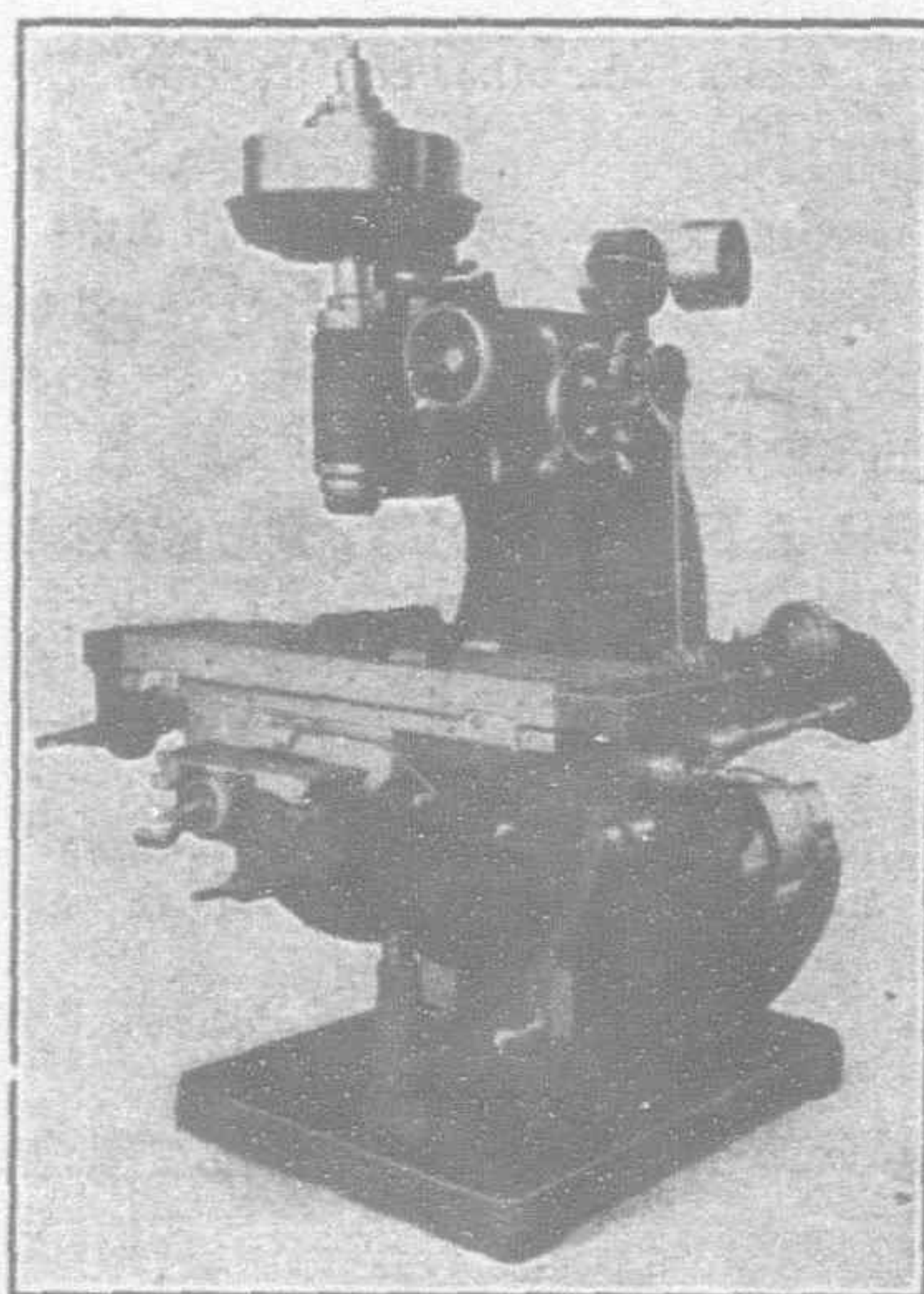
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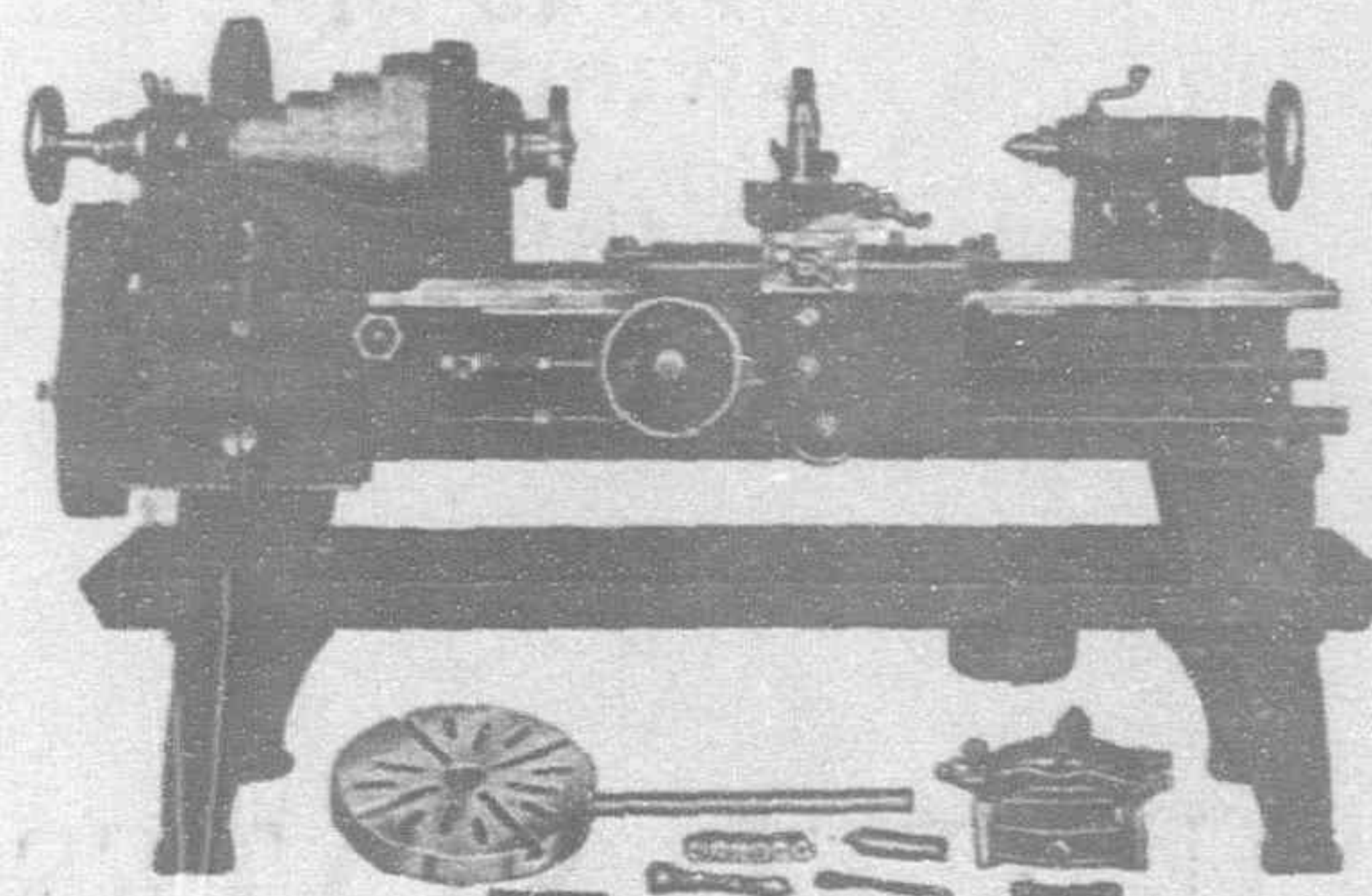
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BALE TIES in baling army hay
WIRE HOOPS on food containers
NAILS in building cantonments, overseas and other construction
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